



# ECHO IRELAND

Journal of the  
Irish Radio Transmitters Society

June 2011



Mayo Radio Experimenters Network  
2m Counties Contest



## Society Officers 2010/2011

|                           |  |             |                                    |
|---------------------------|--|-------------|------------------------------------|
| President:                | Paul Martin EI2CA                            | 087-2523908 | <i>paul@comma.ie</i>               |
| Vice President:           | Seamus McCague EI8BP                         | 01-2988045  | <i>smccague@eircom.net</i>         |
| Hon. Vice-Presidents:     | Sean Nolan EI7CD                             | 01-2851599  | <i>ei7cd@gofree.indigo.ie</i>      |
|                           | Dave Moore EI4BZ                             | 087-6290574 | <i>ei4bz@eircom.net</i>            |
| Auditors:                 | Brendan De hÓra, EI3GV; Brendan Lynch, EI6GA |             |                                    |
| Secretary:                | Ger McNamara EI4GXB                          | 087-2532512 | <i>ei4gxb@gmail.com</i>            |
| Treasurer:                | Sean Donelan EI4GK                           | 01-2821420  | <i>donelansean@gmail.com</i>       |
| P.R.O.:                   | Seamus McCague EI8BP                         | 01-2988045  | <i>smccague@eircom.net</i>         |
| AREN Co-Ordinator:        | John Ronan EI7IG                             | 086 8167310 | <i>ei7ig@aren.ie</i>               |
| Awards Committee:         | Peter Grant EI4HX (Chair)                    | 087-7944779 | <i>ei4hxpperimental@eircom.net</i> |
|                           | Pat Fitzpatrick EI2HX, Jim Holohan EI4HH.    |             |                                    |
| ComReg Liaison:           | Sean Nolan EI7CD                             | 01-2851599  | <i>ei7cd@gofree.indigo.ie</i>      |
| Contest Manager:          | Thos Caffrey EI2JD                           | 087-2953256 | <i>thoscaffrey@hotmail.com</i>     |
| EMC:                      | Brendan Minish EI6IZ                         | 086-2501832 | <i>ei6iz.Brendan@gmail.com</i>     |
| Gaeilge:                  | Pádraig Ó Meachair EI7GK                     | 0404-67658  | <i>ei7gk@esatclear.ie</i>          |
| External Awards/WEIC:     | Sean Nolan, EI7CD                            | 01-2851599  | <i>ei7cd@gofree.indigo.ie</i>      |
| IARU:                     | Sean Nolan, EI7CD                            | 01-2851599  | <i>ei7cd@gofree.indigo.ie</i>      |
| IARUMS:                   | Ger McNamara EI4GXB                          | 087-2532512 | <i>ei4gxb@gmail.co</i>             |
| IRTS Shop:                | Peter Grant EI4HX                            | 087-7944779 | <i>ei4hxpperimental@eircom.net</i> |
| Licence Examination:      | Sean Nolan EI7CD                             | 01-2851599  | <i>ei7cd@gofree.indigo.ie</i>      |
|                           | (Sub-Committee Chairman)                     |             |                                    |
| Membership Officer:       | Joe Ryan EI7GY                               | 01-2854250  | <i>memrecords@irts.ie</i>          |
| Morse Testing Co-Ord.:    | Sean Donelan EI4GK                           | 01-2821420  | <i>donelansean@gmail.com</i>       |
| Chief Morse Tester:       | Dan Lloyd EI3AE                              | 01-8382774  | <i>daniellloyd@eircom.net.</i>     |
| P.O. Box 462:             | Michael McNamara EI2CL                       | 01-8372493  | <i>ei2clmike@eircom.net</i>        |
| Publications Editor:      | Dave Moore EI4BZ                             | 087-6290574 | <i>ei4bz@eircom.net</i>            |
| Publications Distribution | Sean Donelan EI4GK                           | 01-2821420  | <i>donelansean@gmail.com</i>       |
| Radio News Editor:        | Aidan Noone                                  | 085-7100511 | <i>newsteam@irts.ie</i>            |
| Repeater Co-ordinator:    | John McCarthy EI8JA                          | 087-9437500 | <i>ei8ja@eircom.net</i>            |
| VHF Manager:              | Trevor Dunne EI2GLB                          | 087-2217829 | <i>ei2glb@hotmail.com</i>          |
| WAI Awards Manager:       | Tom Rea EI2GP                                | 093-35523   | <i>tomrea@eircom.net</i>           |
| WAI Book Sales:           | Dave Moore EI4BZ                             | 087-6290574 | <i>ei4bz@eircom.net</i>            |
| Website Editor:           | Seamus McCague EI8BP                         | 01-2988045  | <i>smccague@eircom.net</i>         |
| Website Designer::        | Gerry Kavanagh EI8DRB                        | 087-7996336 | <i>pagemaster@irts.ie</i>          |

## QSL Bureau

|                            |                        |             |                                   |
|----------------------------|------------------------|-------------|-----------------------------------|
| QSL Inwards Manager:       | Pat Fitzpatrick EI2HX. | 041-9841817 | <i>patfitzpatrick@hotmail.com</i> |
| QSL Outwards Manager:      | Tony Baldwin EI8JK     |             | <i>ei8jk@amsat.org</i>            |
| Incoming QSL Sub Managers: |                        |             |                                   |
| 0/1/Calls & SWL:           | John Browne EI7FAB.    |             |                                   |
| 2 Series Calls:            | Thos Caffrey EI2JD     | 087-2953256 | <i>thoscaffrey@hotmail.com</i>    |
| 3 Series Calls:            | Pat Fitzpatrick EI2HX. | 041-9841817 | <i>patfitzpatrick@hotmail.com</i> |
| 4 Series Calls:            | Jim Ryan EI3DP         | 021-4632365 | <i>pamasada11@yahoo.ie</i>        |
| 5 Series Calls:            | Terry Webb EI4GLB      | 087-6199943 | <i>terencewebb@hotmail.com</i>    |
| 6 Series Calls:            | Rory Hinchy EI4DJB     |             | <i>rhinchy@iee.org</i>            |
| 7 Series Calls:            | Roland Byrne EI4GYB    |             | <i>rolandbyrne@ireland.com</i>    |
| 8 Series Calls:            | Brian Canning EI8IU    | 086-2514822 | <i>brianei8iu@eircom.net</i>      |
| 9 Series Calls:            | Dave Deane EI9FBB      | 083-3317940 | <i>ei9fbb@oceanfree.net</i>       |

## News Bulletins and Readers

|                |      |                   |     |   |
|----------------|------|-------------------|-----|---|
| <b>Sunday</b>  |      |                   |     |   |
| Dublin         | 1100 | 7.055             | SSB | Sean EI7CD, Roland EI4GYB, Ger EI4GXB<br>Francis EI5GOB |
| Wicklow        | 1130 | 3.680             | SSB | (as Gaeilge) Paddy EI7GK, Danny EI6GS                   |
| Dublin         | 1145 | 145.525           | FM  | Tony EI5EM, John EI7JG, Frank EI6EF, Liam EI3HK         |
| Dublin         | 1200 | 3.650             | SSB | As 1100   |
| Mayo           | 2000 | 145.600 - 433.450 | FM  | 70.375 - 50.450   |
|                |      |                   | FM  | John EI7IQ, Padraic EI9JA, Jimmy EI2GCB                 |
| Tipperary      | 2030 | 145.450           | FM  | Tommy EI2IT, John EI2JB, Andy EI5JF, Eddie EI3FFB       |
| <b>Monday</b>  |      |                   |     |   |
| Cork           | 2000 | 145.750           | FM  | Vincent EI7HN   |
| Limerick       | 2000 | 145.725           | FM  | Brian EI9AL, Simon EI7ALB, Gerry EI3JU, Ger EI4GXB      |
| Louth          | 2000 | 145.675           |     | Peter EI4HX, Thos EI2JD                                 |
| <b>Tuesday</b> |      |                   |     |   |
| Waterford      | 2130 | 145.650           | FM  | Francis EI5GOB  |
| North Cork     | 2000 | 430.925           | FM  | Lisa EI9GSB   |

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## When is my membership due for renewal?

Your membership renewal date is shown on the wrapper in which the newsletter is posted – above the name and address. For those who receive Echo Ireland by electronic distribution, the renewal date is included in the email alert sent when a new issue is published. Members who pay by direct debit will see “(DD)” after the renewal date.

Use [www.irts.ie/renew](http://www.irts.ie/renew) to renew your membership at any time; you can also renew at a Rally, or by sending your annual subscription directly to the IRTS Treasurer.

Please renew early to keep our postage and other costs down. Membership is extended by 12 months from the normal renewal date whenever a payment is received.

**Joe Ryan, Membership Records Officer**  
[memrecords@irts.ie](mailto:memrecords@irts.ie)





### CW Class at 91 Lr. Baggot Street

The Morse teacher is the late Pat Masterson EI7BM who was a long time IRTS QSL Manager, both incoming and outgoing. Left front is Mike McNamara now EI2CL and right front is Ray Williams now EI1CR.

## Paddy McGorman EI7BS - Silent Key

Paddy McGorman EI7BS of Legnakelly, Clones, Co. Monaghan died at home on Friday May 13<sup>th</sup> 2011.

In the 1940s, during The Emergency, he served in the Irish Army before returning to Clones to marry Mary and to raise a family of three sons and three daughters.



communications. Thought his activity was curtailed of late Paddy was an enthusiastic operator, often to be heard on 80m.

He encouraged others to become involved in the hobby. As a schoolboy, I remember him stopping me in the street and asking about my interest in radio.

Paddy was a well known and much respected figure in the town. He worked with ESB for 42 years and was always determined to ensure that supply was maintained in all weathers, often at personal risk.

Paddy was a founding member of Clones Fire and Rescue Service and served as Station Officer during his 43 years with the Fire Brigade. He introduced the use of "walkie talkies" for two way communication to the service in the 60s.

Other Fire Brigades in the surrounding areas followed his lead to improve their

There followed many sessions in his house, helped by Mary's wonderful cakes, with loans of magazines and equipment and loads of encouragement.

When I got my licence in 1967 a few months ahead of Paddy he immediately loaned me his Eddystone 840 receiver. Two of his sons hold amateur licences, John EI9CE and Gerry EI2DT.

Paddy will be missed for his great personality and generous spirit.

*Ar deis Dé go raibh a anam*  
Séamus McCague EI8BP

## Silent Key Johnny Roche, EI5CJB

The death occurred on June 7th 2011 of Johnny Roche, EI5CJB, 323 Mill Street, Callan, County Kilkenny. Johnny is survived by his loving wife, Kathleen. sons John and Paul, daughters Jackie, Mary, Caitriona and Joanne, fifteen grand children and three great grand children, five brothers and seven sisters. He will be sadly missed by his family, fellow amateur radio operators, SWL's and many friends.  
*Ar dheis Dé go raibh a anam dilis*



**Brendan EI1429**

**IRTS Committee Meeting**  
**September 10th 2011**  
**1100**  
**Maldron Hotel,**  
**Portlaoise**

## Online Access to Echo Ireland

If you would like to have online access to the complete library of Echo Ireland issues from 2001 onwards and receive new issues of Echo Ireland by way of electronic download instead of in hard copy, please advise the Membership Records Officer.

Include your call sign and email address in the request and send it to:  
[memrecords@irts.ie](mailto:memrecords@irts.ie)

## Shannon Basin Radio Club at Elphin Windmill

The Shannon Basin Radio Club once again set up a station in Elphin Windmill in Co. Roscommon for the Mills on the Air Weekend on 14<sup>th</sup> and 15<sup>th</sup> May.

On Friday evening the 13<sup>th</sup> May club members arrived to prepare for the activity. The station was set up in the small visitors centre adjoining the wind mill. This is fully equipped with kitchen, small museum and a lovely hearth fire, which was in constant use over the weekend. After Fergus EI6IB, Sean EI1194 and Tony EI3HA set up the antenna, which was a delta loop, the IC7400 was powered up and SWR checked. EI2EWM was ready! After calling CQ on 17 meters (only the second call) we received a 53 report from NL7UZ, Matt in Alaska. Friday 13<sup>th</sup> was not bringing any bad luck after that! We also set up a VHF station which would also prove to be popular over the weekend.. We packed up for the evening looking forward to the next couple of days.

Although 80 metres was poor, well over a hundred QSOs both on SSB and CW were achieved throughout all HF bands and the majority of other mills on the air stations were worked. These were mainly in the UK, but some were also in Europe. There seemed to be a lot of interest in the call EI2EWM and we ended up with several pile-ups.

As it was not a contest, it was all very relaxed and there was lots of time to talk to the visitors who popped in to see what was happening. Frank EI8GCB brought some French friends who were very impressed to see our station in action not to mention the hospitality they received along with tea and refreshments served beside a turf fire.

Dave EI0DB drove from Mayo to see the station as he had heard about it on the IRTS news.

It proved to be a most enjoyable weekend even though the weather was not exactly summery (when I complained about the wind I was told that there wouldn't be much point in having a windmill in a sheltered spot, so that put me in my place) we had lots of visitors, lots of time to discuss radio and lots of QSOs. That is what it is all about.

With relatively small effort a station was set up and DX stations were worked. It is the ideal event for clubs to be involved in and it should be encouraged as it will un-

doubtedly bring some new blood into the hobby which can be seen from some of the junior ops who also participated with the activity.

Hopefully we will activate EI2EWM next year again and achieve even more QSOs and possibly not need the turf fire!

The Shannon Basin Club would like to extend thanks to Sean EI1194, Cyril McDermott and the Windmill Committee for allowing us to set up the station.

Below is some information on the windmill;

### Elphin Windmill

Detached circular-plan three-stage windmill, built c.1730, and restored in 1996.

Thatched rye rotating roof with four timber sails. Timber tail pole connected to roof and resting on cart wheel to ground, used to direct the sail. Timber battened doors to both entrances. "Windmill Cottage" adjoining the mill is in use as visitor's centre.

This early-eighteenth century fully-restored wind mill stands as a reminder of when the mill, thought to have been originally built by local landowner and Bishop of Elphin, Edward Synge, provided meal for the local population.

By 1830 the mill was in ruins. It was sympathetically restored under a three-year project by the FÁS scheme.

It is an interesting and rare structure of architectural heritage and is a captivating landmark.



Garry, SWL



Sean EI 1197



Fergus EI6IB



Anthony EI6GCB



### Cork Wedding

Congratulations to Mark Turner EI3KD/G4PCS and Jennifer O'Donnell who were recently married at the Church of Our Lady & St. John in Carrigaline with a reception at the Carlton Hotel in Kinsale.

Radio amateurs pictured are Billy EI7FJ, Neil EI3JE, Dave EI4BZ, Chris G0HFX, Mark EI3KD, Brian G8DKK, Jerry EI6BT, Hilary EI4IE, John EI8IR, Pete G4CLA





*"Anthony EI3GAB and Lisa EI9GSB will be getting married on 15th July 2011. They wish to invite friends and fellow hams to the evening celebrations and look forward to a great night!"*

## Wanted: HF Newsreaders

Additional HF newsreaders are being sought to share the workload of Seán EI7CD and Ger EI4GXB, especially as the summer months are approaching.

It is hoped that a panel of newsreaders can be established nationwide thus making the workload easier for all concerned and allowing the HF news to be broadcast from different locations around the country.

If you are interested in joining the panel please contact Ger McNamara EI4GXB at ei4gxb /at/ gmail.com or on 087 2532512.

## City of Belfast Radio Club visit Howth Museum



Some members of the City of Belfast Radio Amateur Society to the Hurdy Gurdy Museum of Vintage Radio (EI0MAR) in the Martello Tower overlooking Howth Harbour on Sunday May 15th 2011.

Left to right: Joe Guilfoyle EI2JZ, Tony EI5EM, Harold Sinclair GI4GOS/EI8JU, Billy Saunders MI0XMN, Paul Menown GI4FZD, Paul Irwin GI6FEN

## New US Four Metre Beacon

70MHz is not an amateur band in the USA, but European stations may try to listen for a new 4-Meter Band propagation beacon from the East Coast of the US.

Its operating frequency is 70.005 MHz, QTH is FM07fm, CW emissions.

The callsign of the beacon is WE9XUP.

Any and all QSL/SWL reports are welcome via email to:

WA1ZMS<at>ARRL.NET.

The beacon is scheduled to run 24 hours a day until 1 Sept, 2011.

## 80m EI/GI Counties Contest

The June IRTS 80 metres EI/GI counties contest was on Sunday last. This is one of two IRTS 80 metres counties contests held each year, the other one being in January. The June event is traditionally the quieter of the two, which was certainly true this year.

Many counties were hardly represented at all, indeed Dublin was almost 'rare DX' for most of the three-hour long contest. Band conditions on the day were poor, with deep QSB and high background noise at times. In previous years, band conditions have picked up for the last hour of this contest, but there was no noticeable improvement as this year's contest drew to a close.

In spite of the indifferent weather, a number of portable stations were on the air - these included Mayo Radio Experimenters Network who operated from their home county, Oleg EI7KD who was portable in Dublin, Paul EI3ENB operating portable in Kilkenny and Joe EI7GY who was in the Slieve Blooms in Co. Offaly.

Joe EI7GY



Joe EI7GY/P Co. Offaly



# Lough Erne Rally 2011

Many thanks from Lough Erne Amateur Radio Club to the 300 folk, who variously set up, attended, traded or displayed amateur radio interests at April's Pearl Anniversary Lough Erne Rally in the SHARE Centre, County Fermanagh.

This was another enjoyable and interesting rally with stands and displays set up by traders, large and small, clubs, repeater groups and other special interest groups. The crack was mighty among a widespread attendance of northern amateurs, southern experimenters, and some from Scotland and Yorkshire across the water.



Cliff Corderoy GI4CZW with Frank Jackson G3ZMX

His club's historic thirtieth rally was 'probably the best' enjoyed by its founder member Cliff Corderoy GI4CZW, whose RAE courses from 1975 on brought many into amateur radio.

Cliff was Secretary in 1982 and announced the first ever Rally that April in the Lakeland Forum, Enniskillen. At the Club history table 30 years later, Cliff got loads of crack from old photographs, press cuttings and rally programmes, especially with Frank Jackson G3ZMX back over from Yorkshire for the occasion, who had been Secretary nearly ten years ago when he lived in Fermanagh.

Nevada Radio, the major amateur radio retailer donated an Alinco DJ 596E hand held transceiver for the raffle. It was won by Phillip Hosey, MIØMSO/EI8GPB, the Secretary of LEARC's very good neighbour West Tyrone Amateur Radio Club.

This neat handheld VHF and UHF transceiver has an output of 5 watts. It raised more than earlier rally raffles.

The proceeds assist the Club's amateur radio initiatives.

Rally income funds the Club's Fermanagh Repeater GB3CP as a service to all mobile radio amateurs in Fermanagh and nearby counties.

With the GB3CP display were others for Dundalk, West Tyrone and Omagh repeaters, and Echolink node MB7ICU.

Mayo Radio Experimenter's Network displayed its impressive range of activities. Chairman Jimmy Kelly EI2GCB presented his cousin, the host Club Chairman Michael Clarke MI5MTC with a big photograph of him with the Pat Conway Cup presented at the Limerick AGM to mark LEARC's NI Club of the Year Award.

Peter Grant EI6HX and Pat Fitzpatrick EI2HX were there with the IRTS stand.

Peter gave an interview to a community radio journalist about Marconi's involvement in Ire-

land's amateur radio roots.

Angus Annan MM1CCR came over to represent RSGB.

He presented the NI Regional Club of the Year Award to LEARC's youngest member, Gemma Nelson MI6GDN, and congratulations certificates to nine new Intermediate licensees.

Willie Long EI6AI was also there, looking hale and hearty.

This report may seem more about people that the wide range of traders big and small.

Yes there were lots of interesting bargains and goodies to buy.

The social buzz was good in itself and its ambience made the rally a good place for traders to trade.



Angus Annan MM1CCR presenting Phillip Hosey, MIØMSO/EI8GPB, the Secretary of West Tyrone Amateur Radio Club, with first prize in the raffle, an Alinco DJ 596E hand held transceiver donated by Nevada Radio.

The Club had taken care to set a date for this 2011 rally that did not clash with other amateur radio events and has done likewise for the next rally.

It is set for 1st April 2012, a date easy to remember, Sunday before Easter, in the event's traditional month, clear of Lagan Valley rally on 3 March (provisional) of Blackpool rally on 15 April and of the IRTS Dinner, Rally and AGM in Dundalk later on 21st & 22nd April 2012.

Ken O'Reilly GI7UIP took a lot of pictures and posted them on Facebook.

Go to

<http://www.facebook.com/media/set/?fbx/?>

set=a.10150147333741706.280609.708381705&l=4721191228

Michael Clarke MI5MTC  
Chairman, Lough Erne ARC



Angus Annan MM1CCR representing RSGB presented the NI Regional Club of the Year Award to LEARC's youngest member, Gemma Nelson MI6GDN



## YL Football World Cup 2011 Award.

The Deutsche Amateur Radio Club e.V. (DARC) is sponsoring this award to celebrate the Women's Football (Soccer) World Cup 2011.

Both licensed amateur radio operators and short wave listeners (SWL's) can apply for this award.

In the period beginning June 1st and ending July 31st, 2011, the **special station DL0YLWM** and **YL district stations** with the callsigns DL0YLx or DR11YLx and the special DOK YLWMx will be on the air.

The character x stands for the respective **DARC district**, e.g. DL0YLF will be active for DARC district Hessen and use the special DOK YLWMF.

Participants may apply for four awards (Bronze, Silver, Gold and Platinum level). To achieve one of these awards, you need to log the appropriate number of German YL stations in the given time frame. There are no band limitations. Any mode of operation except Packet Radio and Echo Link may be used. So-called "roundtable QSOs" do not count for the award.

Bronze needs DL0YLWM, 5 YL District Stations and 11 German YLs  
Silver needs DL0YLWM, 8 YL District Stations and 22 German YLs  
Gold needs DL0YLWM, 11 YL District Stations and 33 German YLs  
Platinum needs DL0YLWM, All YL District Stations and 33 German YLs

Full details at  
<http://www.darc.de/referate/yl/yl-fussball-wm-2011/yl-wm-diplom-2011/english/>

## Skerries Windmill on the air.

Skerries radio club (EI 2 NCR) were active at the recent Mills on the air weekend which took place on the 14<sup>th</sup>/15<sup>th</sup> of May.

Their main station was setup inside a 5 sail windmill (photo 1), the rig used was a Kenwood TS 570, (see photo 2) and the aerial a full size G5RV.

The second station (see photo 3) consisted of a Yaesu FT 897, a half size G5RV and also an Alinco DR-135 2m rig.

### Getting everything ready.

Its funny how much stuff you bring to a portable event, its not good enough for you just to make sure you have brought all the gear you promised you would bring, and then you bring some more stuff just in case others forget to bring some of their gear with them, and of course the spares for the spares just in case, and using the old adage "it's better to be looking at it, rather than to be looking for it".

### On the air.

The bands were very active and we spent most of Saturday looking for other mills whether wind or water type. The first of the many visitors to drop into the shack was Anthony EI2KC and he wasted no time in getting stuck in and worked many CW (A1A) contacts.

Most of the time was spent on 7MHz and many UK mills were worked, and even a few mills in PA land and a ZS station, we are not sure if the ZS was a mill, but a Q is a Q. oh my God! I mean a contact is a contact, Phew, I thought I was been assimilated into the contest collective.

On Sunday many more stations were worked, most were mills, we even worked a fellow EI mills station (EI0Z/P).

But we worked non mill stations as well, (oh yes we are not biased, we hate everyone the same amount).

The main shack radio was kept at 95 watts, with the last 5 watts been kept back just in case we had to get through a pileup, like the one that was worked by Windy Miller in the mill in Trumpton.

The weather was very good for the weekend which was a great help in setting up and taking down both the aerials.

Some of the visitors said it was a great site but it was a pity about the wind, so they were told that was why the mill was there in the first place, as there weren't too many mills to be found in sheltered places (Doh).

### What was all the fuss about?

You never seem to mind loading up your car/trailer/van when you are going to your event, but when the fun is over, food eaten, tea drank, oh, and I nearly forgot, having



played with the radios, it is now time to load up all the vehicles and for everyone to head for home.

You could be forgiven for thinking, what was I thinking of, who in their right mind would bring so much good stuff (c#\*p) with them, see photos 4 and 5, for an event that was only a couple of kilometres away from home and not on a piece of rock off the coast of Wherethefeckarewe. Roll on next year for the next mills on the air, but keep an ear out for EI2NCR over the summer months as the club will be calling out from Ardgillan Castle, to give the C.A.S.H.O.T.A. (Castle and stately homes on the air) a go.

### Thanks.

We would like to thank the manager and staff of the Skerries mills complex for the use of their mill for the weekend, and we would like to remind you that the mills are open all year round from 10.00 until 17.30 in the summer and until 16.30 in the winter. You can also avail of the guided tours, the complex also has an excellent craft shop and refreshments are available. For more details please go to [www.skerriesmills.org](http://www.skerriesmills.org).

73 from all at the Skerries radio club.





# HF Happenings

with Anthony Murphy EI2KC

## Tempus Fugit

They say time and tide wait for no man and as I sit down to write HF Happenings for the second time I can hardly believe how quickly 2011 is passing by. The old maxim *tempus fugit* rings true for us radio amateurs, who find time inexorably marching on as we enjoy the long days of midsummer and the great extended openings on the bands that the extra daylight brings.

It's now six months since those bitter cold days when the snow covered the land and our antennas were thick with hoar frost and weighed down by white stuff. Perhaps even the briefest of thoughts about those bitter days will cheer us up and help us realise what a fantastic pick-up in conditions there has been in that half-year.

Winter is not always the enemy of the radio experimenter, however. Having experienced a bleak first winter on the air in 2009 after being licenced in late October of that year, I faced into winter of 2010 with much brighter prospects. Firstly, I had learned CW, which meant I could make more contacts on 80 metres and 40 metres, but it also opened up 30 metres to me. On top of that, I now had digimodes capability, so there would be much more to enjoy than in 2009.

In December last, with the help of Tony EI4DIB, I installed a 30m inverted-V in my very modest garden in the hope of snaring some new DXCCs on that band. The day we installed it, I had a total of 93 DXCCs worked on 30m. By April, I had a total of 129, and today it's up to 132. So a bit of focus on a particular band, with the help of a purpose-built antenna for that band, can reap big rewards.

## The Summer time challenge

But I do not wish to spout on about winter while we're enjoying the gloriously long days of midsummer. The challenge facing us in June is much different to that which we endured in wintertime. The challenge is deciding what band to work! There are so many bands alive in the June evenings that one is hard pressed to choose one over another. In addition to this, 6 metres is regularly open (although I promised Trevor EI2GLB that I wouldn't talk about VHF in this HF column!).

There has even been some DX activity on 80 metres and 160 metres for those with decent antennas on those bands. As I write this, I am looking at my logbook and see that in the past few days I have worked QSOs on almost every band. There was an OY on 160m which was a new one for me on that band and I can assure you I haven't had a QSO on top band in about two months! I heard PY Brazil on 80m CW the other evening but the EU pile-up was too intense for me to try to break through. But I did work a few contacts on that band. Even 40 metres, which might not interest many of us during the summer time, has yielded some excellent DX in recent weeks. If you're interested in trying to nab some new ones, there are some DX nets on 40. In particular I have listened in to Roger ON7TQ and his net on 40m and found that I could hear some interesting DX stations on that band. 30 metres is still alive and indeed now that it's winter time in the southern hemisphere there is a greater possibility of hearing VK/ZL and other distant stations on that band.

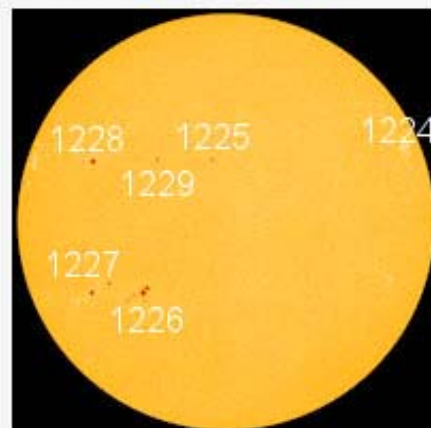
Of most interest to the Dixer right now is everything above that. So 20 metres, along with 17m, 15m, 12m and 10m offer some great opportunities for DX. 20 metres (14 Mhz) has often been described as the "bread and butter" DX band. The arrival of summer means we can enjoy excellent conditions on 20m long into the evening, and indeed the early hours on many nights. I remember the frustration of mid winter, when 20 metres would be closed when I arrived home from work shortly after 6pm. Now though, things are much better. This has been helped by a lift in solar conditions, of which I will mention more later.

One thing I've enjoyed about 20 metres over the past couple of months is the great DX that is to be found on the digital modes. I've worked a few new countries on 20m using PSK or RTTY. In one night in May I nabbed TG Guatemala and CP Bolivia which were both new ones on that band. And those contacts were both made after midnight on my Butternut vertical.

## The Higher Frequencies

Most of the enjoyment of getting new DXCC entities over the past number of

## Daily Sun: 01 Jun 11



Sunspot complex 1226-1227 poses a threat for [M-class](#) solar flares. Credit: SDO/HMI

Sunspot number: 105

months has been on the upper bands. You will have found, like I did, that often times there is activity on 17m, 15m, 12m and 10m well into the evening. And indeed, well into the night.

These bands may not be as lively as 20 metres in the late evening, but it is well worthwhile keeping a close ear on them because strong DX stations can pop up out of the murk even when the band seems dead. For instance, I worked an OA (Peru) station on 15m coming up to midnight a few weeks ago when that band sounded completely dead. Of course often times the DX that crops up on the higher bands after dark is in the direction of South America or the Caribbean. I suppose the vast expanse of salt water between us and them, called the Atlantic Ocean, may have something to do with that!!

With improved solar conditions there has been increased activity on 12 metres and 10 metres. In fact just a month ago I finally reached 100 DXCCs worked on 12 metres in what can only be described as a remarkable coincidence. My 100<sup>th</sup> entity on that band was Saudi Arabia, specifically HZ1GW. The operator, Ken, was delighted to hear that he was my 100<sup>th</sup> DXCC on 12 metres. But then he checked

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his own log and said, "you are also my 100<sup>th</sup> country worked on 12 metres!" A great night for both of us!!

10 metres (28 Mhz) is the area of greatest excitement for many Irish hams right now, especially those of us who have been licenced in the past seven or eight years. "How come?" I hear you ask. Well, that's because we have not enjoyed a sunspot peak before and the joys that it brings. With the current sunspot cycle expected to peak in May or June of 2013, we can expect, or certainly hope for, many great DX contacts on 10 metres in the next couple of years. Just talk to someone like Tom EI9CJ, who has recently applied for DXCC on 10m for contacts he made in the 1980-1981 period, and he will tell you just how exciting it gets. However, this peak might not be as good as the one experienced in 1980, but let's keep the fingers crossed.

### Propagation

In my first column a couple of weeks ago I think I tempted fate when I said the solar flux hadn't dropped below 100 in a couple of months. Since then sunspot activity has dropped and the solar flux not only dropped below 100, but it started plummeting, hitting a low of 82, by which time I was beginning to think the sun was going back to sleep! I dreaded the return of the bleak days of 2009 when there were no sunspots for weeks on end. But nay, I needn't have worried. As I write this things are picking up again, with a solar flux of 112, and a total of six sunspot groups on the earth-facing side of the sun (see photo).

This lift did not go unnoticed and indeed one Florida-based ham (Thomas NZ4O) reported a great contact on 10 metres during this lift:

"As of this morning UTC the solar flux reached 113.8 and the sunspot number 132, as the upward trend continues. In the past seven day period the daily solar flux index (SFI) rose from 79.7 to 113.8 and the daily sunspot number

(SSN) rose from 23 to 132. The indices are high enough once again for east-west radiowave propagation on 10 meters. Yesterday evening on 10 meters I worked JT1BSA using only 10 watts SSB to a one foot long steel ruler through an antenna tuner in my radio shack."

So there you go – it is true – you could work the world on a coat hanger if the propagation was good !! But propagation can behave in strange ways, as Doug EI2CN found during the WPX CW contest recently.

"Wow, what a weekend! Conditions were lousy here, the 20m band only opening to the West after about 1500z and then I thought of 160m conditions! Noise there was plenty of and then the band would go quiet and there were no signals to be heard on my calling frequency but after a while the propagation would sort of return with plenty of accompanying noise to go with it. Some of the distant stations had an arctic flutter and ring on them so that CW became more difficult with a smearing of the signal."

"Plans had been to go on fifteen or ten if the sunspots were high enough so as to guarantee some more sleep, some old timers need this. Alas the numbers looked poor so twenty was chosen. It is soul destroying to have a low Q rate. Twenty turned out to be a late night band (late being after 2200) here with the early afternoons being somewhat of a waste except for working brother EU stations and thank God for them!"

"Oh it was a thrill to work JA and ZL in this contest considering the conditions and VK3TDX called me on Saturday evening when I was beamed on W land that provided a lift."

### Recent DXpeditions

I will be honest at this point and admit that I've been on the radio a bit less this past month or so and any time I had was devoted to the great openings on 6 metres, which opened here earlier than last year. So I have not had much time to chase the DXpeditions, not that there has been a huge amount of activity on that front. Probably the most



interesting of recent weeks was PP0T, working from Trindade Island off Brazil. They were heard on 10 metres CW one evening in my shack but alas the EU pile-up was too great and I didn't get through. But it was tough going for Ireland as many EIs found out. In fact at time of writing only thirteen EI calls had made it into his log. Top of the pile with four QSOs was Thos EI2JD, followed by John EI5JC with three, and Dave EI9FBB also on three, and three EIs on two slots piece - Gerry EI9JU, Tony EI7JN and Eoin EI9O.

Others to make it into the log included EI7BA, EI2JB, EI0W, EI4II, EI9HX, EI3GRB and EI9KC.

### DX& DXpeditions

#### A92IO, Bahrain

I have received communication from Dave Court, EI3IO, who of course is known to many hams both here and internationally as A92IO. Dave says, "The current plan is that I will be staying in Bahrain (A9) until summer 2013, although this is of course dependent on day to day events. I have had over 25,000 QSOs from February 2010 until now, on all bands from 1.8 to 50MHz (except 4m and 60m). However I plan to be QRV on



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5 MHz and 70 MHz from A9 in the coming months.

Since moving to A9 I have been sorting out the “wall-paper” for the EI3IO shack. See pictures. The DXCC certificate for the last band (24 MHz) has been received from ARRL and completes the 10 band DXCC. A WAS (Worked All US States) certificate for 160m has also been received from ARRL. For the IOTA award programme 300 and 400 island certificates have been received from RSGB. I also recently received confirmation that two WAZ certificates have been awarded by CQ Magazine, the first is for all 40 CQ zones on 160m and the second is for 30 zones worked on 6m.

I am always keeping a look-out for stations from the Western European Isles, when operating from A9. I have an on-line log, use Logbook of the World extensively as well as conventional QSLing. Lots of information can be found on <http://EI3IO.com> or on <http://QRZ.com>.”

### 3D2/R, Rotuma

South Korean operators Choi (HL5FUA) and Yoon (6K2GCW) will be active as 3D2CJ from Rotuma (OC-060) in September, dates to be confirmed.

Activity will be on 160-10 meters using CW, SSB and the Digital modes. QSL via HL5FUA, direct or by the Bureau.

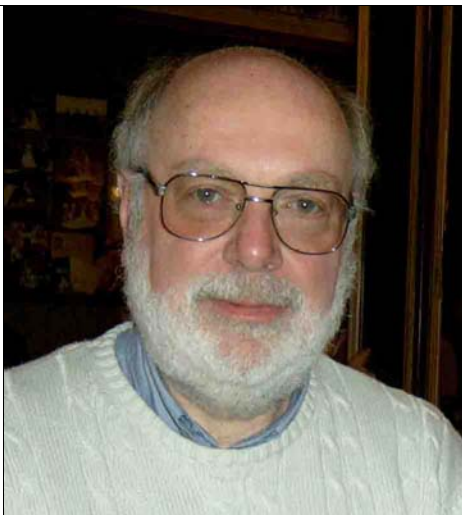
For more details and updates, see: [http://www.dxpeditio.co.kr/rotuma\\_2011/index.html](http://www.dxpeditio.co.kr/rotuma_2011/index.html)

### FP, St. Pierre and Miquelon

Operators Paul (K9OT) and Peg (KB9LIE) will be making their 8th annual trip to Miquelon Island (NA-032), from July 21<sup>st</sup> to August 4th.

They will sign FP/K9OT (prefer CW on 40/30m) and FP/KB9LIE (strictly SSB, mostly 17/20/40m unless higher bands are open). They will try to run a breakable 6m beacon on 50.120.

Both will be in the IOTA Contest as a



Congratulations to Dave EI3IO on achieving his 10 band DXCC. He is only the second EI amateur to do so.

Multi-Ops/Mixed-Mode entry. QSL to their home callsigns, same address, either direct with return postage/IRC or via the Bureau.

Logs will eventually be uploaded to LoTW. No eQSLs. Visit the following Web page at: <http://www.hamradio.pnpfarms.com>

### T8, Palau

Operators Taka (JA0BJR), Toshi (JP1IOF) and Toshi (JE1SYN) will be active as T88ZA, T80T and T8YN, respectively, from Koror Island (OC-009) between June 24-27th. Activity will be on 80-6 meters using CW SSB, FM, RTTY and PSK31. They will have two stations on the air. QSL via their home callsigns.

### KU2F/VK4 – Lizard Island

Kan, KU2F plans to be QRV from Lizard island, OC-187 as KU2F/VK4 between July 18-21, 2011. This will be a holiday style operation on 40-10m CW & SSB. QSL via JE1SCF.

### C21AA, Nauru

Members of Pacific DXers have announced that six operators will be active from Nauru with three complete stations on HF as well as a dedicated 6m station.

Nauru is currently ranked at 44 on the world wide wanted list, 31 in most of EU and 19 on the wanted digital mode list. The team fully intends to operate on SSB, CW, RTTY and PSK31. They will be on all bands 160m thru to

6m. The DXpedition takes place from November 10<sup>th</sup> to December 6<sup>th</sup> 2011. Prior to operating from Nauru two of the team will operate from Fiji, VK4AN as 3D2A and VK4FW as 3D2T, including an entry in the CQ WW DX Contest.

### V6, Micronesia

Aaron, W6ANM, will be active as V63FAA from Kosrae (OC-059) between July 26-29th, and Pohnpei (OC-010) between July 30th and August 4th. Activity will be focused on 40 and 20 meters using CW and SSB.

A contact can be scheduled via the E-mail address on (QRZ.com) for any HF band. QSL via LoTW or direct to W6ANM (please include SASE).

### FW, Wallis & Futuna

Laci, HA0NAR, and two other operators will be active as FW0R from Uvea Island (aka Wallis, OC-054, DIFO FW-001, WLOTA 0389, WW Loc. AH16VS) next year (2012) between January 25th and February 23rd. Operations will be from Vailala village (Hihifo district). They plan to have two stations on the air with amps operating on 160-6 meters using CW, SSB and RTTY. Focus will be on the lower bands, especially 160/80/40/30 meters using Spider (18m) verticals.

A week long side trip will be also organized to Futuna Island (OC-118, DIFO FW-017, WW Loc. AH05WQ) for the IOTA hunters in early February. The team also plans to take part in the ARRL DX CW Contest (February 18-19th). For more info/updates and an online logsearch, see the Web page at: <http://www.ha0nar.hu>

### S9, Sao Tome & Principe

Matt K0KKO and Ed K0GUV plan to be active from Ilheu das Rolas, Sao Tome & Principe using the callsigns of S92DX, S9CW and S9SX on HF and 6m. They will have two 6m stations. Activity between October 21-27, 2011.

Thanks to [www.dx-world.net](http://www.dx-world.net) and OPDX which were accessed for information on some DXpeditions.

That's all for this issue, folks. I hope that conditions continue to improve and that you get some really great DX into the log. In the meantime, don't forget I'd love to hear about your HF activities for future issues.

You can email me at [hamradioireland@gmail.com](mailto:hamradioireland@gmail.com).

73 es GL es best DX de EI2KC





# World Radiocommunication Conference 2012 (WRC-12)

WRC-12 will be held in Geneva from 23 January to 17 February 2012 and the amateur service throughout the world will be carefully watching the outcome of agenda item 1.23.

## WRC-12 Agenda

Agenda Item 1.23 of the WRC-12 agenda is as follows:

“1.23 to consider an allocation of about 15 kHz in parts of the band 415-526.5 kHz to the amateur service on a secondary basis, taking into account the need to protect existing services”

The frequency range 415-526.5 kHz is currently allocated in the Radio Frequency Plan for Ireland (ComReg 08/90 20 November 2008) to Aeronautical Radionavigation Beacons, Maritime Mobile, NAVTEX, Maritime GMDSS, and Short Range Devices (SRDs).

The background to the proposal is that traditionally the band had been used extensively by these services due to its good ground wave characteristics.

However, technological advances have resulted in a decreasing use of this spectrum by the traditional services.

A worldwide frequency allocation to the amateur service within the segment mentioned in agenda item 1.23 would provide an opportunity to experiment with very reliable ground wave communication which would help to broaden the knowledge base of radio amateurs and enhance self training opportunities in LF technique and propagation.

Radio amateurs are in a unique position, because of their numbers, levels of activity and geographical distribution, to contribute to the improvement of knowledge about radio wave propagation and its anomalies.

## Present Position

Since June 2009, ComReg has joined an increasing number of countries that have granted some form of access by stations in the amateur service to frequencies in the region of 500 kHz (UK, Croatia, Sweden, Norway, The Netherlands, Germany, Denmark, Czech Republic, Belgium, Iceland and Spain as well as the USA, Canada and New Zealand, outside ITU Region 1).

This agenda item has been considered within the CEPT and ITU structures by CEPT CPG PTC-6 which held one of its meetings in Cork in January 2010, ITU-R WP5A and the ITU Conference Preparatory Meeting (CPM).

The CPM has now completed its work on the agenda item and the following three possible methods of dealing with the matter remain:

**Method A:** A secondary allocation of up to 15 kHz to the amateur service on a worldwide basis between 472 and 487 kHz.

**Method B:** Two non-contiguous worldwide secondary allocations to the Amateur service at 461-469 kHz and 471-478 kHz, totaling 15 kHz.

**Method C:** No change to the Radio Regulations (i.e. no allocation to the amateur service).

The USA, Canada and others within the regional organisation CITEL favor Method B.

Within CEPT, Method A is the main option being considered but our understanding is that a European Common Position has not yet been reached.

The segment 472 to 487 kHz was an initiative of the UK at the Cork meeting and a multi-country paper (UK, The Netherlands and Sweden) went forward from that meeting to ITU-R WP5A.

While policy decisions here in relation to WRCs are ultimately matters for the Department of Communications Energy and Natural Resources (DCENR), it has been indicated to us at our meetings that ComReg would not be opposed to granting a secondary allocation to the amateur service of about 15 kHz in the 415-526.5 kHz band.

## Experience of 500 kHz

It has been very useful that a small number of amateur stations here were given access to the segment 501-504 kHz in mid 2009 as it permitted those stations to participate in the international experiment on this band.

Ireland is a useful location for experiments at MF because of its position relative to both North America and Europe. This allows for studies of long cross water paths (Ireland to the US/Canada) as well as largely land based paths to the UK and Europe.

The band lends itself to stable ground wave coverage over a much larger area than on HF and it was interesting to discover just how far the ground wave coverage can extend over salt water paths by the reception of signals from EI0CF in the Faroe Islands by EI6IZ during daylight hours, a distance of approximately 730 kilometres.

A comparison between signals on the next available frequency band (1.8 MHz) was made by EI0CF from Malin Head with South Wales. This showed that the MF frequency was clearly better. Both stations were using similar power (35-40 watts) and antennas were much the same.

During winter conditions communication has been established both in the 501-504 kHz segment and cross band (i.e. stations transmitting on 3.6 MHz and receiving in the 500 kHz segment).

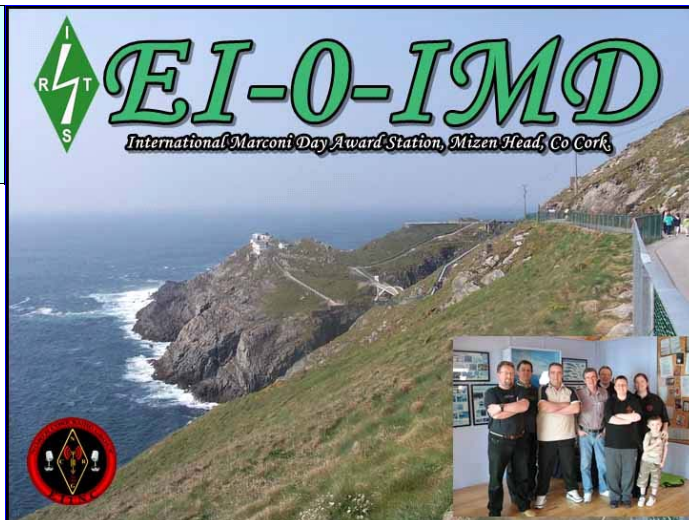
Stations in England, Scotland, Wales, Norway, Sweden, Finland, Russia (Moscow), Germany, Czech Republic, Slovakia, Italy, Spain, Portugal, France, Ukraine, USA and Canada have been worked and logged.

## Our Proposal

A paper has been submitted to the DCENR which sets out all of the above points and in addition includes an introductory section giving the background to the amateur service.

This paper proposes that a policy decision be taken, to support the adoption of a European Common Position within CEPT, in favor of granting a worldwide secondary allocation to the amateur service at WRC-12 of about 15 kHz in the 415-526.5 kHz band.

## Marconi Day EI0IMD at the Mizen Head Visitor Centre By Anthony Cummins EI3GAB



For Marconi day this year I decided to do something a little different, previous years have seen my participation from either home or field days in my locality and this year I thought I might attempt to celebrate in true "Marconi style" as many clubs and groups do around the country and indeed world wide.

In early January I came up with the possibility of attending the famous site in the Mizen peninsula but with such a site comes one great draw back, extreme weather conditions. I scanned the internet looking for an ideal location and very quickly came across the Mizen Head Visitors center. After reading the brochure and gazing the many mesmerizing pictures I was hooked and set about making contact with Sue Hill of the Mizen Head Visitors Center and Signaling Station at Goleen. Sue was wonderful to deal with and very quickly came to my aid, in not only supporting my event but also supplying the accommodation at the center itself, what a fabulous opportunity!

In the weeks leading up to the weekend, I applied for the call sign and was issued EI-0-IMD. I communicated with the other amateurs in the North Cork Radio Group, a team of 4 operators was organized for our activities and the final arrangements were made.

On the morning of the 29<sup>th</sup> April, Pat EI2GHB, Padraig EI5GEB and myself with young Jordan SWL, set off on our journey. We used S22 for some chatter and banter on the way down and really hoped someone might pop in on the events frequency to find out what was happening, no one came back but this didn't deter us from the fun we were having.

We arrived at the center a little after 1600 where manager, Stephen, met with us, you couldn't ask for a nicer man and his manner and kindness really set us at ease in this unfamiliar location. Stephen showed us around the center to which we were granted total unlimited access and also showed us our sleeping quarters that were aptly named the "keepers quarters". At 1730 the facility closed to the public and we were joined by Claus EI7JZ and we then set about equipping our new



Jordan SWL at the Mizen Light

home for the weekend with the radio goodies we would need to get on the air. The radio used was an Icom 746 PRO but the antennas really turned into a little nightmare for us.

Firstly, we set up a very simple OCF Carolina Windom at 10 meters on a Clark mast and used 10m fiberglass poles as

supports, this finished at about 1900. All tied off and secured, we grabbed some tea, thinking to ourselves "that didn't take long, plenty of time to kill". Little did we know what the Mizen had in store for us? On arriving back we tuned up on all bands and to our shock and surprise not one band would tune, look-

ing at each other puzzled we blamed the coax and whipped and whipped out a new one, SWR ... "ding" through the roof again? What was going on?. Claus had brought his little TransWorld TW2010 Adventurer Antenna, so we thought "great we'll get on 20m and take a look at the other antenna in awhile" ... ding!! SWR, far too high? Bewildered we had no clue what or why this was happening and after the same results on 2 more antennas we were worrying we might not be able to participate, the analyzer was showing the antennas to be perfect but the radio was telling another story. Eventually after hours of messing about we got Claus's antenna to work somewhat, but not to its full potential. It only worked at certain angles and only tuned for use on 20m but just in the nick of time at 5 minutes to midnight UTC.

As midnight kicked in the band became alive with calls and our friends at Cork Radio Club, EI5IMD got quite a pile up for their station at Brow Head. The event was held in spectacular spirit and operators from both sides of the peninsula verbally spotted each other for people to collect the awards. Brow Head is only 5 miles as the crow flies and as you can imagine, 3 stations in the area could get rather messy but thanks to the spirit of amateur radio both EI0IMD and both EI5IMD's worked side by side without issues, a very big thank you to Jeremy EI5GM & Dave EI9FBB and company, who I suspect knew we had issues and couldn't move band so had some of their contacts come up to us, great show lads and very much appreciated.

Day 2 and it wasn't until I had a little wander around the museum while scratching my head thinking of antenna issues that I had a eureka moment. Right there on the wall was the answer, Mizen







Anthony EI3GAB and Lisa EI9GSB

Head is located on a mass of rock and while reading the stages of evolution, I discovered why Marconi in his wisdom had left Mizen to erect his antennas at Brow Head. The land we stood on was extremely rich in both gold and copper deposits, which made it extremely hard to get an antenna to resonate in the right places. Armed with this new info I discussed my findings with the others and Claus suggested a ground plane antenna should work "with the rocks" rather than against them, but we didn't have a ground plane. Next step was an old faithful, we have used this antenna on previous events and for such a simple antenna it really is fantastic, its branded as an EZ Wire from CT1FFU, simply put it's a 60+ foot length of wire on a 1.9 balun fed with coax, the antenna needed some minor repairs and after Mick EI9GNB arrived for the evening we set about fixing and strung it up late on the 30<sup>th</sup>, amazingly it worked a treat, if only we had known this all along and had the right tools for the repair job.

With the Marconi event finished that night, Claus made a final last minute dash to get the QSO's in the log we finished up with 6 continents, 11 CQ Zones, 15 ITU Zones, 34 DXCC's, and a max QRB 17,251km over 272 voice contacts, considering the issues we had it was a reasonable log and we celebrated with a few beers.

The following day, Sunday most of the Group went home but myself, Pat and young Jordan stayed on for one final night of operating under the club call EI1NC/P. Jordan is 11 years old and has just started showing an interest in radio so myself and Pat helped him through his first few QSO's and by his sixth he was sounding like a pro. For the night he netted 60 contacts and has vowed to study for the HAREC in the coming 12 months. We ended Monday morning at 0300 exhausted and looking for a good bath and bed, showing 3 continents, 8 CQ zones, 11 ITU zones, 27 DXCC's, and a max QRB 8,458km over 133 contacts.

All in all, we had a fabulous weekend, the staff at Mizen Head were extremely hospitable and we got to see the fantastic views of "Ireland's lands end" I think next year we'll be packing an assortment of quality antennas and possibly a second station, definitely worth the trip whether its for radio or just a visit.

Anthony Cummins EI3GAB



Claus EI7JZ and Ingo DH5ST

## Dundalk Amateur Radio Society EI7DAR/P

Jim 2I0SBI, Tom EI9CJ, Brian EI9GTB, Thos EI2JD and Peter EI4HX



## Zulu's in a Mill

On Sunday 15th May, the Amateur Portable Group were on the road again, this time they headed to Rathfeigh in County Meath to take part, for the first time in the mills on the air weekend.

We were lucky enough to gain access to Delaney's Mill, thanks to our own David EI7GEB for sorting this one.

David EI7GEB



Delaney's Mill located in Rathfeigh County Meath was built c. 1820 and is a three storey three bay water powered corn mill, fed by the river Hurley.

The site is privately owned.

The set-up on the day consisted of a Yaesu 897D, Yaesu FT 847 and a Kenwood TS-450 and antennas used were two 6m Pro whips and an American made dipole for 40 and 80m.

Band conditions were yet again quite poor, with mostly European stations in the log, and EI's were thin on the ground. 40m come to life in early afternoon with massive pile-ups and huge support from the UK stations, with some voicing their disappointment at the lack of EI mills on the air (only three I believe, including us), so big were these pile-ups we decided to close the other two stations and work 40 in rotation. Operators on the day were Charlie EI8JB (who managed a dash to the shops for the much needed coffee and doughnuts, thanks Charlie), David EI7GEB and John EI6GHB.

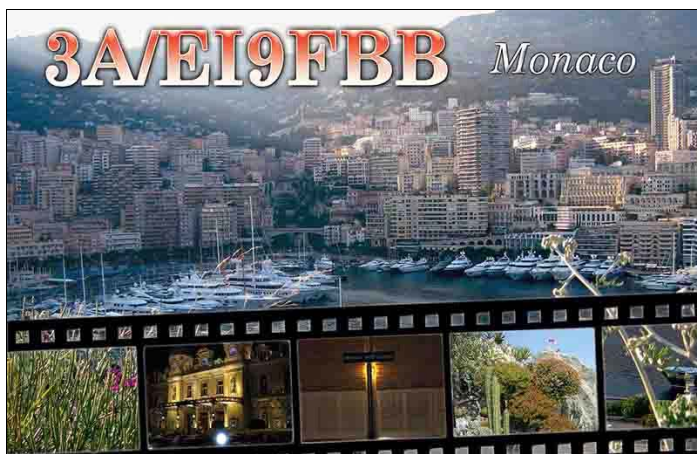
After one contact with a fairly close EI4CI, he decided to call his chauffeur (son) and pay us a visit, nice to meet you for the first time Pierce.

With the weather changing rapidly from cloudy to sunny and warm to cold it wasn't too long before the first inevitable raindrops began to fall, so at 1800 we decided to close down and pack away the gear. After a few photos of what is a lovely location, we headed for home, happy with our first mill activation.

EI0Z will be back on the road and on air for the museum weekend in June.

Thanks to all who took the time to make the contact.





Monaco, a truly unique Sovereignty, Country and City State situated in the French Riviera. It's no wonder why this semi-rare entity is currently ranked at #99 on the '2010 Most Wanted DXCC list'. With a population of just 36,000, Monaco is the most densely populated country in the world and also classed as the second most expensive country to visit. Coming second to the Vatican City, Monaco is the second smallest country in the world too measuring a mere 0.756 sq. mile.

Definitely one of the rarer of EU entities, I had opportunity to visit here in late April for a short 3 day assignment. Monaco is a relatively easy place to get to, with Nice airport being the gateway to the French Riviera region. A scheduled daily flight from Cork with a brief overnight stay in Nice was my preferred option and proved an easy, cost effective and hassle-free choice.

Following a 20 minute train journey, brings one into the 'Gare' (station) and once outside, Monaco is a very easy place to get around and get familiar with. French, is of course the main language.

I had already made contact with Laura, 3A2MD who runs a B & B. Laura, is very well known on the amateur bands and is mainly a CW op. Married to Jean-Claude, 3A2ND, they offer limited use of their shack to visiting hams which was most appreciated. Sure takes the hassle and risk of bringing one's own equipment. Besides, there's really very few places to operate from in Monaco, and by all accounts, hoteliers are rather unaccommodating to allow antennas etc.

Being built on the side of a 1,260m cliff, makes it rather chal-



Pictured at the weekly ARM club meeting:  
Joachim 3A2MS, Robert HB9TSE ex 3A2MY, Laura 3A2MD,  
Franco 3A2MW, Jean-Claude 3A2ND

lenging to get a signal out of here to say the least as this 'rock' practically wipes out everything in a 180 degree span from S/W through N/E. Best path to beam EI was believe it or not, S/E over Africa. NA/JA openings are limited and are normally via long path. As a result, 3A is much sought after here.

Operation was limited to 100 watts, and although a TL-922 amplifier was on situ, there's always a risk of causing interference from such a densely populated place. Also, a higher than usual noise level was prominent. Definitely NOT the ideal location for low-band operation.

The well equipped shack consists of an FT-990 (main rig), FT-847(VHF+) & a TS-940S while antennas include a TH2 for 10,15 & 20m, HF2V vertical for 40 & 80m and a 160m sloper. This of course can be tuned for WARC operation.

26 different EI call-signs were logged on all bands from 80m to 15m, both CW and SSB. In fact, due to poor conditions, 70% of QSO's were on CW as constant CQing on SSB often proved a worthless effort. After all, a CW signal often gets through where an SSB one can't!



3A QSL Bureau

On several occasions, I had a fast listen around on 6m but in poor conditions, no QSOs were made on the magic band. In total, 650 QSO's were logged in little over 10 hours of casual operating and all these QSO's have already been uploaded to LoTW/eQSL. Paper QSL's should be appearing in the mail-boxes by the time you read this.

One highlight was a good opening to JA late one evening where 90 JA's were logged. Another was a 'K3' station who had e-mailed me whilst still in EI looking for a sked. Despite a few failed attempts he finally came up to a 559 on my last operating stint and he logged me as his # 325 entity! A few minutes later we even worked on SSB! It is these little rewards that make DXpeditioning such fun.

Better still, was an invitation to come along to the 3A weekly club meeting. ARM (Association des Radioamateurs de Monaco) is the National Amateur Radio Society of Monaco. Founded in 1953, the group meet every Saturday morning in their 'Clubhouse' which is in the University.

Although a little restricted, they have an FT-847 and an ATAS 120 antenna permanently installed here and the hour long meeting normally consists of a 30 minute chat/discussion with the remaining 30 minutes spent on QSL buro duties.

The 'Clubhouse' consists of 3 rooms; a main meeting room/shack, a workshop and the QSL Buro.

The 3A buro works very well and is efficient and each member takes their turn. There is about 25 resident 3A stations and the majority of these are all members of ARM. The few that I met on the day proved to be a great bunch and unfortunately the hour passed far too quickly.

I'd like to thank Laura and Jean-Claude for being such great hosts and for making me feel so welcome and to all who helped generate those massive pile-ups – hi!

Looking forward to my next visit.

73 until then de EI9FBB



## Cork Radio Club at Brow Head for International Marconi Day



EI9FFB EI4JF DH5ST EI2IV EI9GRB EI2KA EI5GM EI4BZ Karl SWL EI8HT EI9GA

The Cork Radio Club used the callsign EI5IMD for their activation of the original Marconi Transmitting site on Brow Head near Crookhaven in West Cork to celebrate the 110th anniversary of the setting up of Marconi's Wireless Station in 1901.

Two stations were set up and 1,700 QSOs were made into 77 DXCC Entities on the day. Aerials used were a Tri-bander for 10/15/20 plus verticals and dipoles for the other bands.

Thanks to Tim EI2KA who was the local liaison and special thanks to John Walsh, site owner, Danny O'Keeffe who allowed use his facilities and to Richie Barry for his great help in making contacts and getting publicity locally.

Thanks to Ger EI8HT, Hans EI9GRB and Anatoly EI4JF for the use of their campers, to Tim EI2KA and Dave EI4BZ for the use of their tents and generators, to Jeremy EI5GM and Dave EI9FFB for the use of their equipment and to Declan EI9GA and Karl SWL, for their great help in hauling the gear on to and off the site. Thanks also to Ingo DH5ST and James EI2IV for their help.



Hans EI9GRB and Ingo DH5ST

## 70 MHz Beacon QRV

The 70 MHz beacon is finally back on the air. The beacon and antennas were put on site on 1st June by Paul EI2CA, Paddy EI5HS, Séamus EI8BP and Seán EI7CD.

The site is 950 feet above sea level near Enniskerry, Co. Wicklow with a QRA of IO63ve.

The site is screened to the west but is clear from north round to south.

The beacon runs 20 watts ERP sequentially from two 3 element Yagis beaming NE/SE on 70.130 MHz.

There is a frequency shift on the note which was not evident when the beacon was soak tested off site into a 50 ohm load and this will have to be looked into.

The beacon was originally constructed by a small group headed up by Tony Enright EI6DT.



EI5HS, EI7CD, EI2CA (Pics by EI8BP)





# Marine A.I.S. - An Amateur Radio Perspective

Cormac Gebruers EI4HQ ei4hq.mail@gmail.com

AIS (for Automatic Identification System) is a radio telemetry vessel tracking technology and the most significant innovation in maritime communications in a generation. AIS is now installed on all ships and a growing number of smaller boats worldwide. AIS can easily be picked up and decoded by radio amateurs. In addition to being interesting radio technology, AIS has characteristics that make it particularly interesting to those who study VHF propagation or have an interest in VHF DX. What follows is a whistle-stop tour of AIS with an emphasis on the technical. For clarity I've intentionally omitted *many* details but I hope it will give you a flavour...

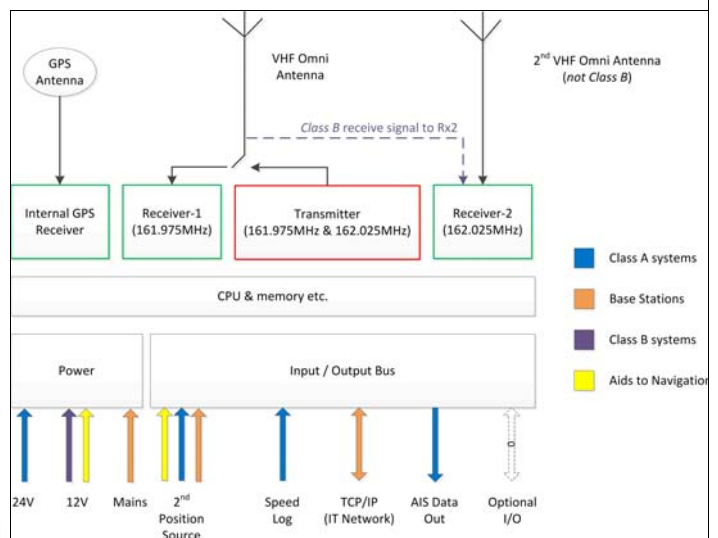
So why AIS at all? AIS was originally intended to provide better *situational awareness* on board vessels - a fancy industry term for what amounts to reducing the risk that ships will hit one another. In practice the main beneficiary of AIS has not been vessels but shore authorities who now have the ability to track vessels around their coast in real time for safety and enforcement purposes.

AIS is ultimately a network. That network consists of vessel nodes that move (most nodes are of this type) and fixed *base station* and *Aid to Navigation* nodes that are located on the coast. Base stations are operated only by state maritime authorities. In Ireland this is the Irish Coast Guard. Base stations provide traffic monitoring for the operating authority but also play a less well known but critically important role in managing the AIS network at a radio and physical network level. AIS Aids to Navigation (known hereafter as AtoNs) are selected navigation marks such as buoys, lighthouses etc. that broadcast themselves over AIS to support safer navigation. In Ireland AIS AtoNs are the responsibility of the Commissioners of Irish Lights.

From a radio perspective AIS nodes come in four flavours; *class A* nodes are generally bigger ships engaged in commercial or professional activities, *class B* nodes are smaller (mostly) leisure boats, the third node type are the base stations and lastly the AtoNs. All these nodes transmit and receive data at 9600bps using a 25KHz GMSK (Gaussian-filtered Minimum Shift Keying) modulated signal broadcast on two dedicated marine VHF frequencies - 161.975MHz (ch87) and 162.025MHz (ch88). On an FM radio they sound like short bursts of static. These nodes, and the RF transmit-receive paths between them make up the AIS network, a network that is constantly changing in shape and size as moving vessels continually join and leave the network as they cross the limits of one another's reception coverage and that of the coastal base stations and AtoNs. AIS is a VHF *line of sight* system but as we amateurs well know sometimes interesting things happen... more on this later.

The hardware installed on vessels (both class A and B types), base stations and AtoNs differ somewhat but the major components are common to all. You can see those basic building blocks in the block diagram. Inside every AIS box you'll find two *separate* VHF receivers and one VHF marine band transmitter. All class A, base station and AtoN transmitters transmit at 12.5w. Class B transmitters have a much lower 2w output. Every AIS unit also has a built in GPS receiver. Class A, base station and AtoN units also have an input for a second external positioning data source (not necessarily GPS, though GPS is most common at present). A second positioning input exists to

provide increased positioning integrity which is important for bigger or faster ships. For base stations it is necessary because they are used as positioning and timing references for the AIS network. Knowing precisely where an AtoN is located is rather fundamental for safe navigation as these are key points off which vessels determine where they are! All vessel TX/RX antennas are omni-directional unity gain verticals. Class A installations have two VHF antennas - one for each receiver - and one of these also doubles as the transmit antenna. Most base station and AtoN antennas are also omni-directional unity gain verticals though sometimes higher gain directional antennas are used to optimise coverage. Other principle connections can be seen in the diagram. Base stations have additional hardware and software to support network management and various other optional functions (as do AtoNs), for example high preci-



sion positioning augmentation. The details of these bells & whistles lie beyond the scope of this introduction however. The only remaining items are the now commonplace CPU, memory and software so often present in modern RF equipment. An AIS system is as much computer as radio.

Where things get interesting is when we take a look at the data protocol that makes AIS work. (*Technical warning; this explanation is vastly simplified!*). AIS employs three variants of a data protocol called *Time Division Multiple Access* or TDMA for short. Class A nodes (ships) use *Self Organising* (SO) TDMA, the base stations and AtoNs *Fixed Access* (FA) TDMA, and *Carrier Sensing* (CS) TDMA is used by the class B units (the smaller craft). The basic idea with TDMA is that each time interval is divided into a number of fixed length slots, 3600 each minute in the case of AIS. Each slot is used to broadcast a piece of data by one node. The name of the game is managing who gets what slot(s) in each transmission cycle so that every node gets a chance to transmit and to ensure collisions are avoided. As the name suggests Self Organising TDMA (SOTDMA) enables all the nodes that can hear one another to organise slot allocations among themselves dynamically as a group.

Fixed Access TDMA (FATDMA) dictates that a node gets the *same* transmission slot(s) every cycle. The SOTDMA nodes take into account that FATDMA slots are reserved when planning their own usage and will not clash with FATDMA re-



served slots. Carrier Sense TDMA is a TDMA variant that results in a node *only* using a slot when it detects it is not in use by any other node. CSTDMA is a “only if not in use” rule enforcer. The clever bit is by interleaving FATDMA, SOTDMA and CSTDMA AIS maximises the available bandwidth i.e. number of slots very effectively in a given geographical area while ensuring that highest priority is given to shore base stations (after all they manage the network) and Aids to Navigation (knowing where you are is critical), with next priority going to the big ships i.e. the class A nodes and lastly the smaller boats are relegated to fitting in around the mission critical stuff (not everyone would agree this is right but that’s the way it’s been decided!).

In practice the AIS protocol works extremely well and has performed admirably in practice even in the most dense areas of shipping traffic around the world. The other nice aspect of the AIS protocol is if link capacity *is* exceeded, vessels that are further away are effectively *dropped* in favour of those vessels that are closer to a given node. This is done on the basis that a navigator is more worried about the vessels closer to her than those further away. This *distance based graceful degradation* is possible because AIS transmissions regularly include transmitter geographical position information allowing relative distances between transmitters to be easily computed.

The AIS platform’s additional robustness is down to the one obvious oddity you may have wondered about in the hardware; the two entirely separate receive chains in the class A, base station and AtoN configurations. All AIS data is transmitted first on one radio frequency and then immediately duplicated on the other. By doing this the chances of data corruption or non-reception because of RF interference is halved.

SO what information is exchanged over AIS? The answer is lots! There are actually 26 different AIS message types. These cover, just as a sample, everything from indicating a vessel’s position to Search and Rescue aircraft position, UTC time, Safety related broadcasts and many more obtuse messages related to network management functions carried out by *base stations*. AIS even supports binary messages that can contain

within them additional user defined data not covered by the standard pre-formatted message types. Casual users will be most interested in vessel position messages (types 1,2 & 3) and vessel static data messages that include name, vessel dimensions, destination etc. (type 5).

What does the end result look like?

Take a look at the screen capture:

If you want to decode AIS signals yourself (or indeed monitor other digital modes that use frequency or phase shift keying like



POCSAG, FLEX etc.) then you really need to extract unfiltered audio from your receiver. You can find that signal at the output of the discriminator stage. The tap needs to be taken immediately after the discriminator as audio filters and amplifiers follow that can heavily distort a digital signal significantly reducing how many messages you will successfully decode. Once you have a clean signal you can then decode AIS messages by feeding the signal to the input of your computer soundcard and using a software package such as *Shipplotter* ([www.shipplotter.com](http://www.shipplotter.com)). This topic is very well covered on the web so I won’t re-hash it further here.

AIS may be of particular interest for VHF propagation studies as class A and class B nodes constitute *Standard candles*. By this I mean their transmit power and antenna gain are known (either 12.5w or 2w) with unity gain. Furthermore AIS messages identify precisely where the transmitter is, whether the transmitter is a class A or class B and the transmitter’s course and speed allowing determination of whether it is moving towards or away from the receiver and how quickly. Hence AIS transmissions provide excellent sources of RF transmissions for propagation studies.

There are plenty of ships around as well so coverage density isn’t a problem - at least to points East and South from Ireland where the VHF/UHF DX lies too! AIS transmitters are of course waterborne so AIS can help to plug gaps in previous studies where all transmitters monitored were land based. In terms of predicting VHF/UHF DX openings, as a rule of thumb if you’re seeing AIS targets beyond normal line of sight then 2 metres is almost certainly open and 70cms is worth a look too!.

And so ends the whistle-stop tour. Of necessity I’ve omitted many of the deeper details. The complete AIS technical standard is contained in a lengthy and detailed document issued by the International Telecommunications Union entitled *ITU M.1371-3 Technical characteristics for an automatic identification system using time division multiple access in the VHF maritime mobile band*.

For anyone who wishes to understand this technology in detail then this document is a must read. Happy Listening!

| Vessel Information |                         |
|--------------------|-------------------------|
| Name:              | Vessel Class A          |
| MMSI:              | MOL CREATION            |
| CPA:               | 309046000               |
| IMO:               | 2.50nm 2417m55s         |
| Call Sign:         | 9321237                 |
| Status:            | C6WD9                   |
| ROT:               | Under way using engine  |
| SOG:               | 0 °/min                 |
| COG:               | 0.3kts                  |
| Position:          | 353.00 °                |
| Pos accur:         | 50 36.179N 1 0.816W     |
| Hdg:               | >10m                    |
| Dest:              | 306 T                   |
| No. Persons:       | SOUTHAMPTON             |
| Dim (l x w) m:     | n/a                     |
| EPFD:              | 316 x 46 (227 89 31 15) |
| UTC reports:       | GPS                     |
| RAIM:              | 13 s                    |
| AIS Ver:           | not used                |
| Age:               | 0                       |
| Dist:              | 00:51                   |
| Brg:               | 12.34nm                 |
|                    | 161.3 deg               |

Prev Next Again Filters Close



# My Magnetic Loop Experiences - Part 2

By Jack O'Connell EI7HO

## Progress !!!!!

Having recovered from an arm twisting session with 4BZ (had to wait for the plaster cast to be removed Hi) I venture to report on what (little) progress I have

made with the Mk3 loop mentioned in my previous article.

Due to limitations of space and wanting to rotate the loop as well, the loop had to be more compact than the Mk2 loop. I decided, at first, to have a diameter of 1 metre with eight spokes and nine formers attached to a circular hub of chip-board. First, I set out the nine formers with a 100mm semi-circle at one end tapering to 25mm over a length of 180mm out of 12mm MDF. Next I drilled 32 holes in an 80mm circle in each. A further 2 holes would be drilled later to fix the formers to the spokes.

The spokes were cut to length, 350mm by 21mm by 21mm and the 400mm circular hub cut from left-over 15mm chipboard.

The position of the spokes and formers were set out and marked.

Next step was to assemble the frame and attach the formers to the spokes.

The wiring, previously removed from the MK2 loop was threaded through the formers. One end was already soldered to the PCB ring so this was positioned and the loop set up for soldering at the other end.

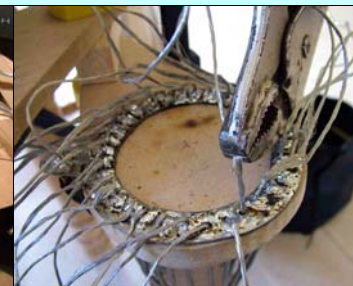
The two end formers were temporarily offset and clamped in position to allow access for soldering the second PCB ring.

At this point, I had second thoughts about the diameter of the loop and a recheck of the attic space was made. This lead to an increase in the diameter to 110cm. This was the maximum possible with the hub diameter and spokes. With a pull here and there the formers were repositioned on the wires and fixed in their new positions. Next the wiring was cut to size (plus a few centimetres for tensioning, the insulation was trimmed back to the former. The bare wires were then threaded through the PCB ring in the correct order ready for soldering. Each wire had to be tensioned while soldering and I accomplished this by using a vice grip which had just enough weight to tension the wires without being too tight and keep all wires at roughly the same tension.

With the soldering complete the wires were trimmed and the formers re-aligned and fixed in position. I had some 50mm by 50mm timber left over from a previous project so this was cut to 770mm long and the 330mm left over was used as a spacer to allow clearance for the loop formers at the lower end and long enough to allow further height adjustment if needed.



Original soldered ring



Soldering & tensioning

These were attached to the loop frame and to the 400mm by 400mm by 9mm MDF base from the old Mk2 loop.

I also had a spare faraday loop which was approximately the right size, this is usually one fifth of the loop diameter, so that was used along with the 1000pf air-spaced capacitor which was minus its motor at the time.

The connecting leads from the loop to the capacitor were fabricated from braid removed from some RG213 co-ax and soldered to the PCB rings on the loop and 2 cable lugs used to connect to the capacitor. I also covered the braid with shrink wrap tube but only heated it at the ends to shrink it to fit the lugs so as to leave the braid insulated and as flat as possible. I checked operation on the dining table as usual and with a little tweaking here and there managed to get it to tune across the bands, 80m to 20m, so far so good.

The loop was then transferred to the bedroom and coupled to the FT990 for more testing especially in early morning on receive only as tuning was very critical especially on 80m and 40m wasn't much better.

In the meantime I put together another slow motion drive and base for the capacitor which was then removed and attached to the drive and base, and refitted to the loop for further testing. I used a two pole reversing switch as a temporary controller and fed it with approximately 6 volts. This allowed more accurate tuning so band changes were possible.

The change from 80m to 40m was a slow process without a variable voltage but the other band changes weren't as slow. Best results were on 40m and 20m. 80m was a bit disappointing; generally several S points down on the Mk2 loop but this was to be expected as the Mk3 was considerably smaller. I didn't try if it would tune up on 15m as there was no propagation at that time but I don't think it will go there as the diameter is probably too big. As you can see in the photo the loop was mounted on a tripod but unfortunately it was not secured.



9 MDF formers cut & drilled



Assembled frame



Wired, ready for trimming and soldering



The enlarged loop also showing coupling loop under test



This led to one of the spokes pulling its mounting screws out of the chipboard hub when I got too ambitious in moving it about and it took a tumble.

Luckily it was easily repaired but this prompted me to fit another piece of chipboard 165mm in diameter by 15mm thick which fitted snugly in the centre between the spoke ends and took the strain off the spoke mounting screws.

The next part of the project is the construction of the rotator but how I got on with that is for the next issue.



View of opposite side showing mount spacer and air spaced capacitor

## Lough Erne Runner-Up in Club of the Year Final



Lough Erne Amateur Radio Club has emerged second in the final RSGB Club of the Year Award competition sponsored by Waters and Stanton plc. The results were announced at the RSGB AGM, in Derby on 14th May. Reading & District ARC won the Trophy, a Certificate and £1,000. Bolton Wireless Club, third received a Certificate and £250.

RSGB President, Dave Wilson M0OBW presented the runner-up certificate and a cheque for £500 to Michael Clarke MI5MTC and Alan Gault GI6PYP representing Lough Erne ARC at the RSGB AGM. (pictured above).

Earlier, Lough Erne won the Region 8 (Northern Ireland) Club of the Year, last year and again this year. The Club was then judged alongside the twelve other regional winners. This time it emerged in the top three in April. The final ranking was announced at May's Derby AGM.

Alongside the Northern Ireland Club of the Year Awards, IRTS awarded the Pat Conway Cup at Dundalk AGM to Herbie Graham GI6JPO whose work as Treasurer and on the GB3CP repeater project had helped win the RSGB Club Award. Citing the second Award the Pat Conway Cup went to the Chairman Michael Clarke MI5MTC at the Limerick AGM.

2010 was the best ever year in Lough Erne ARC history. At two AGMs it elected Committees determined to lead, organise and make things happen. The Club moved to SHARE, already the rally venue. It became venue for all meetings, always about amateur radio and license courses. Rally income funded improvements to its Repeater GB3CP, then a mobile mast, rig and field station equipment to use for a Geopark station GB2MAC, JOTA etc. These kept busy a near four-fold increased membership, lapsed returning and many newly licensed. The Club built its place in the Community using local press and it also in amateur radio, for example reviving its call sign GI0LEC to highlight its County, Fermanagh in the IRTS Counties Contest. Club Chairman, Michael Clarke MI5MTC commented – “these awards were earned entirely by the enthusiasm of members using their club to work together focused on real amateur radio interests. Important also were the support and facilities at SHARE, which featured in both award submissions. Were we not in SHARE we might be nowhere today.”



### Filip ON4TA

Filip ON4TA has been holidaying in EI during which he carried out over 20 activations for Summits On The Air.

Filip is pictured in action on Croghan Mountain on the Wexford/Wicklow border during the co-activation with Joe Ryan EI7GY. They were on 30m, 40m, 2m and 70cms.

## IRTS Contests

VHF/UHF Field Day July 2/3rd  
SSB Field Day September 3/4th  
2m Counties August 28th

Full rules on [www.irts.ie](http://www.irts.ie)



## South Dublin Radio Club News

On Tuesday 17th of May a demonstration on how to solder an 'N' type connector, which is used for UHF and microwave frequencies was demonstrated at the club. This was followed by soldering the PL259 for the club 2m/70cm rig. This enabled the club shack to get on air. Afterwards the HF window aerial was connected to the HF rig. All the equipment appears to be working 100% so expect a lot of activity in the Dublin area on Tuesday nights. The club call in frequency is 145.350 as well as monitoring local repeaters.



Modified Receiver with power switch and fuse for LNB

On Tuesday 24th of May Daniel EI9FHB demonstrated Amateur Television using an old Analogue Satellite Television Receivers. He explained how these can be used without modification to receive Amateur Television pictures on the 23cm 1.2GHz band.

These receivers are now very rare and most will not tune without the original remote control. He also explained how some basic modifications can be applied to protect the now rare receivers. One recommendation is to add a fuse or automatically resetting fuse to the power supply that is provided out of the 'F' type connector which was used to supply power up to the dish. In case of faulty cables or wiring this supply can end up short circuited and the modification prevents damage.

Another simple modification is to add an

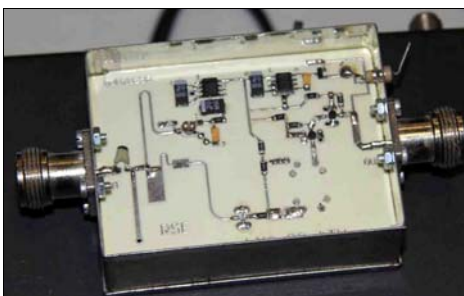


Modified newer receiver

on/off switch, and light indicator to the same supply. Some 1.2GHz aerials will short the DC supply and the switch allows the power to be switched off and on easily and the indicator shows the power has not been shorted and the fuse is OK. The indicator also gives a quick idea if 13V or 18V is being sent up the cable (by it's brightness). This is useful as when operating 10GHz Television the voltage tells the LNB to switch between horizontal and vertical polarisation.

Other modifications include adding a signal strength meter, useful for peaking beams, and modifying older receivers to supply the 13/18V signal, and fitting a knob to quickly scan from the bottom of the band to the top of the band in seconds.

On Tuesday 31st of May South Dublin Radio Club members soldered a simple kit that consists of a custom circuit board, battery holder and flashing light emitting diode. This kit is designed for absolute beginners, including children. It was created to be very simple, effective and low cost. The cost of the kit is only 2 euro. It's a first step on getting those "black box" operators into soldering and kit building.



1276MHZ Preamp



## Colm EI3H R.I.P.



The late Colm EI3H was probably Ireland's best known amateur radio operator due to his news reading on booth 80m and 40m for many decades.

Frances XYL of the late Colm EI3H kindly donated his equipment to the Scouts and to the Museum in Howth.

Joe EI4FV and Sean EI3IP gratefully acknowledge receipt of many items of equipment for use by the Scouts Radio Groups for training purposes and specific items to be given to the Howth Radio Museum, including Colm's 101B HF rig used for many many years for transmitting the weekly Sunday IRTS bulletins on 40m.

These photographs taken prior to disconnection have been framed and presented to Mrs. Ardiffe.

A photograph of Colum's Shack will also be displayed with the equipment at Howth Museum.

## Echo Ireland input to:

**Dave Moore EI4BZ,  
Dooneen,  
Carrigtwohill, Co. Cork  
ei4bz@eircom.net**



## South Eastern Amateur Radio Group Activate Copper Coast for Geopark Weekend

EI2GEO  
Tankardstown  
Bunmahon  
Co. Waterford



For the fourth successive year, the South Eastern Amateur Radio Group participated in the Geopark Communications weekend using the callsign EI2GEO from Tankardstown, Co. Waterford on the Copper Coast Geopark.

The Copper Coast gets its name from the 19th Century copper mines that were once predominant in the area. The Copper Coast consists of 25 kilometres of spectacular coastline. Oceans, volcanoes, deserts and ice sheets all combined to create the rocks, which provide the physical foundation of the natural and cultural landscapes of the Copper Coast.

The Copper Coast is an outdoor geology museum with geological heritage that reflects a variety of environments under which the area has evolved over the last 460 million years. Sedimentary and volcanic rocks illustrate the closure of the Iapetus Ocean, the resulting volcanic activity, evidence of the collision of two continents leading to the creation of Ireland and finally the effects of glaciation from the Ice Age. Cross-sections of these are exposed on the many spectacular cliffs along the Co. Waterford coastline.

For radio amateurs and SWLs around the world who contact or hear Geopark stations, the English Riviera Geopark is offering a special commemorative European Geoparks Network radio amateur certificate for contacts with GB6GEO (instant qualifier), or two Geopark stations excluding GB6GEO. (this award will also apply to SWL's on a heard basis). For information on awards, contact Martin Foster G3VOF (details are on QRZ.com).

SEARG would like to thank everyone that contacted or participated in EI2GEO over the weekend. It's been a very successful Geoparks Communications Weekend with many QSOs worked (both SSB and Phone) despite the bad band conditions on HF. It was an added bonus that the ATV link worked so well.

A live link from the Geopark with cameras mounted both inside and outside the 'shack' were fed to the local ATV repeater on 23cm and a Ustream feed was available on the Internet.

Special thanks to Jim Farrell (EI8IG) who provided the camper van (and the homebrew beer) and of course Paula McCarthy from the Copper Coast Geopark management for facilitating and supporting us over the past few years.

SEARG are looking forward to next years event!



## Introduction to Amateur Radio the Practical Way Mayo Radio Experimenters Network Open Days



The Mayo Radio Experimenters Network are holding a series of practical hands on open days throughout the summer months.

The events will start at 13.00 approx (weather permitting) and will take place on the following dates:

Sunday July 10<sup>th</sup>  
Sunday August 14<sup>th</sup>  
Sunday September 11<sup>th</sup>

Anyone with an interest in radio related matters, who would like to have the opportunity to participate or observe the operation of an amateur radio station, or meet club members, will receive a warm welcome.

Whatever you're level of interest, the club will be pleased to help in taking your interest further, be it a complete novice, shortwave listener or formal assistance in progressing to a full amateur radio licence.

The location for all events will be the car park at the Halfway House on the Castlebar to Westport Road.

If you would like further details please contact: Padraic Baynes EI9JA on 0876957154 (email pbaynes1@eircom.net), email David Hatfield EI3ECB on ei3ecb@gmail.com or text or phone the club mobile phone number 086 2089777.





## Excerpts from the HX files

### A Look at ATV with Pat Fitzpatrick EI2HX - Excerpt 016

Hello and welcome to Xtract 16 of the HX Files.

#### Some brain storming.

During a tea drinking session with Tony EI4DIB, one topic that came up was what to do when you want to test a receiver or a transmitter and there is nobody around to receive a signal from or indeed to send one to.

So not living on top of a mountain, I would have no DX stations to lookout for, so the talk came around to a project consisting of a receiver on one band and a transmitter on another. So after more tea (and a visit to the bathroom) it was decided that a visit to a couple of my stock locations was called for, to see what parts I had that could be used and would not run the risk of being needed for another project.

#### A hunting I will go.

After a couple of hours hunting for the parts in my stock stash's, (shed number 2 and under the bed) and a spot of stock-taking, I decided that a 1.2 GHz receiver and a 10 GHz transmitter would be the frequencies of choice.



In photo 1, with the exceptions of some phono and DC power leads, you can see the parts that would be used in the project. The finished project would be used to receive a 1.2 GHz signal and then that signal would be re-transmitted on 10 GHz.

The receiver's audio and video signal would go direct from the 1.2 GHz to the audio/video inputs of the 10 GHz transmitter. The project box used is one of the waterproof ABS type so that I would have piece of mind when or if it ever rained. The first thing I did was to do a parts layout in the box to see what would go where, not just the Tx and Rx, but smaller parts like the cables used for carrying the voltage, audio and video, a DC distribution bar, fuse holders and aerial sockets.

The mounting hardware was bolted through the box and a good quality sealer used to prevent water ingress. A sub chassis was used to secure the various parts so that if I had to work on the unit it could be removed easily (ish).

So after some measuring and marking (photo 2), I cut an opening in one of the side of the box, this opening is the size of the aperture of the solfen head. I would attach the 10GHz on one end of the box and the N type socket on the opposite end of the same side. I attached the solfen head to the inside of the box and a small extension piece of waveguide that can be seen in photo 1, with that piece having one flange with threaded holes and the other without the thread.



I screwed the unthreaded end to the solfen head and the other end of the extension with the thread would be a lot easier than using small nuts and bolts.

I could also quickly attach and remove various aerials for testing and some other fittings, such as a slot aerial, a horn type aerial, even a transition from waveguide to a SMA or N type and most importantly, some attenuators to minimize the RF output. This would give me a better test from a weak signal as what was the point of putting out a QRO signal when QRPP was what I wanted to test the receiver's, and also, I did not want to "nuke" myself.

It would be attached to the fence at the bottom of my garden about 53 feet from the shack with some attenuators fitted. If I decided to use this project out and about portable it would not be a big deal to undo it.



Photo 3 shows the unit before the spaghetti (the wiring) was added. Photo 4 shows the aerials I would use when the unit was up and running. The aerial on top is a 23cms slot aerial that is covered with heat shrink, on the bottom is a slot aerial and a horn type aerial both for 10GHz.



#### Testing, Testing.

Tony's back garden is 100 foot long and it was used for some testing of the finished unit, using a rubber duck type aerial with an adapter for the receiving the 1.2GHz signal and the slot aerial for 10 GHz. So using a 1.2 GHz Tx, and a modified LNB and an analogue satellite receiver for 10 GHz receiving, the testing was carried out and all went well.

With all the test carried out and passed, the kettle was put on and the tea drank. Later on that night at home I decided to make a mod to the unit. I used 2 long leads, one end of each lead was joined to each of the Rx/Tx units and those leads were joined by back to back phono plug joiners. The reason for this was that if I brought it to another ham's shack the system would be mounted on their mast and with the joiner inside their shack the operator could remove the joiner and connect a camera and then he or she would be transmitting on 10GHz, also by connecting a TV on the other lead you would be receiving 1.2GHz. Not exactly what one would call hi-tech, but it works and it may also get another ham onto the microwave bands and that has to be a good thing.

As a result of the testing of this project I decided to make one the other way around 1.2 GHz Tx and 10 GHz Rx.

I will have some photos of that next time.

That's all for this Xtract, and I hope all your signals are P5.

73 de Pat.



## Thinking about working satellites?

by EI5EV.

Thinking about it, well this might help you decide. First some background information.

I was first licensed in 1980(EI5AMB), passed the CW test a year later and got my present call.

For the next 30 years I worked CW and SSB on HF, moving onto VHF when repeaters came along, also working CW and SSB when conditions allowed. Then came computers and digital modes. I used RTTY for years and then PSK31 when that came out. Until recently I used a mixture of the above and then began looking for something new and I decided to try satellites.

Not knowing anyone using them I looked for information. First I bought a book called the ARRL satellite handbook, an excellent source of information.

I also downloaded a paper from the Am-sat website called working the easy sats. I decided to have a go and at a rally I bought a Kenwood TS790A, an all mode 2m/70cm rig with satellite option (a handy option but not absolutely essential). Next to get was an essential part, a software tracking programme. I downloaded satpc32, a fully working demo version but there are others available also.

After some listening on simple antennas I liked what I heard and bought an F9FT 19/9 element 70/2m antenna for satellite work, i.e the elements are at 45deg to the vertical and to the horizontal.

Finally set up I tried it and found I really knew little about it and had no success. More reading and questions on QRZ.com, a really helpful site, and finally success. Running about 10 watts CW on 70cm.

I worked K9HF via AO-7 getting 579. I had my first satellite QSO. There is a great satisfaction and thrill working the states on 70cm. I was hooked.

However a fixed position highly directional antenna is not much use as the "birds" hurtle across the sky, so next step was a small rotator with the antenna pointed about

30deg above the horizon. This also limited me so I designed and made an elevation control.

Using this setup I have had some 150 QSOs on 9 satellites and worked 25 countries using CW, SSB and FM. Still there were problems. Like why sometimes can't I hear AO-27 when its overhead? One day I can hear AO7 not the next? I can hear SO67 but cannot access it? There are other things you will figure out as you go.

If you are interested then proceed as follows:

1. Get the info I described above or if you know someone who is already on satellites, ask for a demo.
2. Decide if you are going to use directional antennas and the control they require or cheaper omni-directional ones.
3. Decide which satellites you want to use. Most FM satellites require sub audible tones (CTCSS) which most non-sat rigs won't have. SSB/CW satellites don't need this.
4. It is a bit more expensive to get set up for satellites than other modes but after that it depends on how much you want to spend.
5. Finally you go into the shack one day and find not one satellite is available for the next 6 hours, it happens!

Well that's it. I hope it will point you in the right direction. Not many EI stations on satellites. I only ever heard 2 so you will be very welcome.

If you want to ask me a question you can email me at [joe.murphy@bausch.com](mailto:joe.murphy@bausch.com).

All information re uplink/downlink frequencies, modes and operating schedules can be found on the Amsat site. Look under satellite status.

73 de EI5EV



## Higher cancer rate in Antigua due to the short-wave relay there? Or is it due to the small denominator?

"In 1975, the Caribbean Relay Station was constructed in Antigua. The station's purpose was to broadcast international radio content, like the BBC World Service, to most of the western hemisphere.

The station was a monster when compared to cell phone towers, with six radio towers operating at 250 kW.

The station had the ability to broadcast shortwave AM radio far beyond the Caribbean region, well into South and North America.

This station was, by far, the largest operating transmission station in the entire Caribbean.

According to PAHO (Pan-American-Health-Organization) the cancer mortality rate in Antigua between 1992-2002 peaked at 176 cases for every 100,000 people.

This is higher than anywhere in Latin America, according to the same study. Interestingly enough, no other Caribbean island had such radio towers, operating at such power levels as 250 kW.

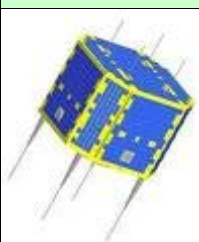
In Barbados, shortwave transmission sites peak at 0.5 kW strength, and in Grenada, the strongest towers come up at 5 kW; the same is true for Jamaica. In our initial publication, we noted that the health effects of EMFs have a 10-20 year delay."

*Measures of incidents-per-100,000 are very nonlinear. Small denominators, such as the populations of small island republics, can produce distortedly high results on such a scale.*

*This might explain why Antigua has a higher cancer rate than the rest of Latin America, but it does not explain the increase from 1996 to 2002.*

*Looking at Pan American Health Organization cancer data for small Caribbean nations, the cancer rates of Antigua do not seem higher than those of the others.*

*The BBC Antigua relay station, which operated from 1975 to 1995, had four 250-kilowatt shortwave transmitters. It was the most important transmitter site for shortwave reception of BBC World Service in North America.*





# Contest Corner

by IRTS Contest Manager Thos Caffrey EI2JD

We are in the midst of another IRTS Contest season. The CW field day is behind us with a very poor turnout from the clubs around the country. The second of the 80m counties may also be behind us and I hope you have activated your county.

## VHF-UHF Field Day

So lets look forward to the VHF-UHF field day which is on Sat 2<sup>nd</sup> and Sun 3<sup>rd</sup> July. In the past few years the Network Southern Area Radio Experimenters Club EI9E has scorched a path for the rest of us to follow being active on all 5 of the VHF-UHF contest bands.

This leaves the "Restricted" section free for the rest of us. In the past this section was 2m only but this was changed a few years ago to allow any one of the bands to be used, this means you and your club can go out portable on 50 or 144 or 432 or 1296MHz CW/SSB/FM. Come on guys, get out there. Put your club call on the air!!!

Please check the contest rules: [http://www.irts.ie/cgi/irts\\_c.cgi](http://www.irts.ie/cgi/irts_c.cgi)

## IARU Contest.

The Society is thinking about entering the Head Quarter section of the IARU contest with the callsign EI0HQ. Those who may be interested in helping out as an operator or with a fixed station, please contact the contestmanager@irts.ie

**Date and Contest Period:** The second full weekend of July, **beginning 1200 UTC Saturday and ending 1200 UTC Sunday (July 9-10, 2011).**

## Question !!! QSY or NOT?

During a QSO recently with the conversation, for some reason, about contesting,

I was asked an interesting question pertaining to the IRTS 2m Counties Contests.

*"If I am not taking part in the contest do I have to QSY after a contact with someone who is taking part"*

Before answering I asked him to explain the reason for the question. This guy is a very active VHFer and is often on air for the IRTS and RSGB contests.

He goes on to explain that he can be on 2m an hour before the contest starts, calling CQ on 145.450 (for example) and getting a few QSO's from both sides of the pond.

The contest starts and he is called by an EI tester, when he explains he is not in the contest but will give a contest report which means the tester gets the county multiplier and the points for the QSO. Here everyone is a winner, but he goes on.

Most operators understanding that he is not in the contest (is not going to enter a log) and move on to find another QSO on another frequency. BUT some taking for granted that he must now move (QSY) just start calling CQ contest on his frequency as soon as his QSO is finished. Hence the question?

Naturally you do not need me to answer the question for you but for those that take it for granted, the answer is NO. We do not own the frequencies during an IRTS contest.

Before you start calling out on a frequency I hope you first check that the frequency is not in use.

If the frequency is in use by another op then he has the use of that frequency.

If he is willing to give you a possible illustrative county even though he has no interest in your contest then you as the tester are winning. Guys, this is all common sense.

There is a portion of the band deliberately off limits to the testers so the rest of you can still have a quiet QSO without having to listen to "CQ TEST". These are the frequencies between 145.500 (the calling freq) and 145.575 inclusive.

## CQWW VHF Contest

Looking forward, we have the CQWW VHF contest beginning at 1800 UTC Saturday July 16<sup>th</sup> and ending at 2100 UTC Sunday July 17<sup>th</sup>.

## IOTA Contest

This years IOTA contest starts 1200 UTC Saturday 30<sup>th</sup> July to 1200 UTC Sunday 31<sup>st</sup> July. This contest always takes place over the last FULL weekend of July.

I am updating the rules on contesting especially where logging is concerned to keep pace with technology. This will mean that at sometime in the near future all logs for IRTS contests will have to be "Electronic Logs". This will be a lot easier for you but especially easier for the Contest Manager as the logs will all be in one format.

Watch this space!!!

Thos EI2JD

## IOTA Contest July 30/31st

### Great Blasket Island

EI5JQ, EI/SQ7JT, EI4JZ, EI9KC will be active from Great Blasket Island - EU-007 during RSGB IOTA 2011 contest on CW & SSB

Call-sign applied for is EJ0PL  
QSL via EI5JQ (Bureau/direct)

### Rathlin Island

Declan EI4HQ, Peter EI4JZB, John GI0HWO and Pete GI4VIV have announced their plans to operate from East Light on Rathlin Island.

They will set up and run a run and multiplier stations using two FT1000mp's 2 x Linear Amplifiers, 2 x A3S Yagis, both with rotators and two verticals, one for 80m and one for 40m plus a 40/80m trapped dipole.

Anyone interested in taking part with them should contact Pete GI4VIV at [gi4viv@yahoo.co.uk](mailto:gi4viv@yahoo.co.uk).

They are especially interested in hearing from CW operators specifically for the multiplier station.

The only proviso is that should you wish to participate in operating from the light-house you must sign an indemnity certificate and provide a copy of your amateur radio licence to GI4VIV ASAP.





## ARDF Game in JSAR 2011

Each May, volunteers from Irish Coast Guard divisions Dublin, Shannon and Malin, and from Northern Ireland gather for JSAR, the Joint Search and Rescue Games. This year's event was hosted by Lough Erne HM Coastguard station at the SHARE Centre.

The local radio club and its rally are also based there, so Lough Erne Amateur Radio Club was asked by SHARE to set up one of the games, something not familiar yet relevant to the skills to be shown by participants. The Club's game was an ARDF Foxhunt with search teams tasked to locate a low power VHF transmitter.

LEARC gave each four-strong team brief training on an ARDF receiver with a three element antenna tuned to the concealed transmitter's signal, which, being VHF, reflected off vehicles, buildings, even bushes and thoroughly challenged search and locate skills.

As did other games, this Foxhunt also tested leadership, search planning, communication and so forth. All were assessed by judges who followed to observe.

The Club has three ROX-2 ARDF rigs built with a part-kit and designed by G3ZOI some years ago for use in summer Foxhunts. This summer's Foxhunt may also involve neighbouring West Tyrone and Foyle clubs in Castlereachdale Country Park.

Two were built by Herbie G16JPA and Ivan G18WJN (photo). A third built by Cliff G14CZW was also very useful for locating the source of severe urban VHF interference from equipment locked in an inner store of a building. The evidence was enough to get Ofcom involved and the interference stopped.

An intelligently operated ROX-2, despite its simplicity, can pinpoint a VHF source



to within one square meter.

Feedback from JSAR 2011 organisers and assessors was very positive. Observing the Foxhunt teams yielded good evidence apt to assessment criteria, leadership, teamwork, search planning etc. That these rigs use headphones, worn by one of the four communicating to the other three, itself gave a great variety of such evidence.

There has been past amateur radio involvement. The very first JSAR in Ballybunion developed an amateur radio and Marconi theme. At Lough Erne this year there were still yarns about Ballybunion and the good work back then by John Carroll EI6AH.

The next JSAR in May 2012 is likely to be hosted by Youghal Coast Guard, between Waterford and Cork on the south-east coast. JSAR 2012 might be another worthwhile opportunity for an amateur radio contribution via a Club, RAYNET Ireland or AREN.

JSAR Website:- [www.jsar.ie](http://www.jsar.ie)

G3ZOI Website:- [www.open-circuit.co.uk/home.php](http://www.open-circuit.co.uk/home.php)

Share Centre:- [www.sharevillage.org](http://www.sharevillage.org)

Lough Erne ARC [www.learc.eu](http://www.learc.eu)

## World Castles Weekend

The World Castles award will be holding an activation weekend on Sat 25th - Sun 26th July, for anyone interested in activating a site.

More information can be found at: <http://www.wcagroup.org/ENG/wcw.html>

Time: From 00:00 UTC of Saturday till 23:59 UTC of Sunday.

Bands: All HF and VHF amateur bands.

If interested go to the World Castle Website to register.

If you require a location reference, then contact your local CASHOTA representative EI5DD, who can issue one at, <http://cashota-ireland.org/>

## WWV to discontinue broadcasting propagation forecasts

On 06 September 2011 the Space Weather Prediction Center (SWPC) will discontinue the broadcast of its propagation forecasts on WWV at 18 minutes past the hour and WWVH at 45 minutes past the hour.

The messages will still be available at [www.swpc.noaa.gov/ftpdir/latest/wwv.txt](http://www.swpc.noaa.gov/ftpdir/latest/wwv.txt)

This response from Patrick V. Gajdys of the SWPC:

"The reason for discontinuing this service is entirely budget-driven.

As we begin to receive reductions to our funding levels, we are forced to examine our entire program and make cuts. The WWV service costs are quite high and the information we provide on it is currently duplicated via the Internet service.

A very large majority of our customers use our Internet feeds, so when comparing the two duplicate services it was clear to us that the WWV service was that most logical service to cut.

All comments received will be compiled and presented to NWS before stopping the transmissions."

**Ciaran EI8IH**



# ComReg Spectrum Strategy Consultation

## Summary of IRTS Response

In mid April, ComReg published a Consultation Paper titled "Review of the Period 2008-2010 & Proposed Strategy for Managing the Radio Spectrum: 2011-2013" – ComReg Document 11/28.

The Society welcomes the periodic publication of these strategy documents, as they give the various interests an opportunity to comment on and seek to influence ComReg's policy on the management of the radio spectrum.

ComReg will consider the responses to the Consultation Paper and in due course will publish its spectrum strategy for the period 2011-2013.

The following is a summary of the Society's response to the document. At the outset it was acknowledged that during the period under review, all of the matters identified as strategic to the then experimenter service, some of which had been included on the basis of representations from IRTS, were achieved. These included:

- Implementation of a once off lifetime licence fee and a reduction from seven to three in the bands requiring special authorisation. These were associated with the new Amateur Station Licence Regulations, 2009
- General access to the 70 MHz band
- Access to spot frequencies in the 5 MHz band
- Upgrade of the 7100-7200 kHz sub-band to primary status
- Modification of repeater station call signs
- Allocation of spectrum at 501-504kHz under a Test Licence granted to the Society

In its strategy for the amateur service for the period 2011-2013 ComReg indicate that the changes to the syllabus for the Licence Examination in line with the HAREC standard introduced by ComReg in conjunction with IRTS will come into effect during the strategy period.

In fact the first examination under the revised syllabus will take place on 7 July this year.

ComReg acknowledge that IRTS has very successfully run the radio amateur examination and it intends to further this relationship with IRTS when the present contract for running the examination expires in autumn of this year.

In its response the society requested that the following matters be included in 2011-2013 strategy for the amateur service:

### **Expansion of the 70 MHz Band**

At our meeting with ComReg on 27 April we raised the question of an extension to the 70 MHz band to 70.0-70.5 MHz. ComReg agreed to consider this matter and suggested we include it in our response to the spectrum strategy paper

In 1962, an allocation was made available, on special application, at 70 MHz (70.2-70.4 MHz).

In February 1973 the band was extended to its present secondary allocation of 70.125-70.450 MHz and in October 2008, under the previous spectrum strategy, was made generally available to licensed experimenters.

As a result of representations by IRTS, ComReg took an initiative through the CEPT WGFM as a result of which a new footnote EU9 was added to the European Common Allocations Table:

*"EU9 In a growing number of CEPT countries, parts of the band 70.0-70.5 MHz is also allocated to the Amateur service on a secondary basis."*

This was an important initiative as it provided a basis in the European Common Allocations Table, for the first time, for making allocations at 70 MHz to the amateur service.

As a result, a significant number of new countries made and are continuing to make such allocations on the basis of the new footnote.

At present some twenty one CEPT countries have amateur service allocations in the band.

ComReg, in Document 10/101 of 5 December 2010, announced its intention to reopen Third Party business radio licensing.

As there was no demand for the low-band VHF channels when these licences were last issued in 2005, it has been decided that licences will not be issued in the band 68.0-87.5 MHz.

In paragraph 6.9 (page 65) of the proposed Spectrum strategy document it is stated that there has been a decline of 35% in the number of business radio licences since 2007. The steep decline in the latter half of 2010 has been mainly due to the transfer of public services onto the Emergency Services Digital Radio (ESDR) network. This is expected to continue as other emergency services move onto the ESDR network and surrender their existing business radio licences.

In the light of the foregoing, IRTS propose that during the period of the proposed strategy the existing band be extended to 70.0-70.5 MHz, an increase of 175 kHz.. This would bring the band into line with that in use by licensed amateurs in Northern Ireland and the UK generally.

There is increasing activity on the 70 MHz band particularly in Northern Ireland and in Dundalk/Drogheda which has the potential for interference by licensed amateur stations in Northern Ireland with any residual low-band business radio users. Alignment of the band here with the allocation in Northern Ireland and the reassignment of any remaining low-band business users to frequencies above 70.5 MHz would eliminate the difficulties that would be caused by such interference.

Use of the 70 MHz band will increase as amateur allocations are granted by more European administrations.

### **Increased Number of Channels at 5 MHz**

Three new 3 kHz channels were sought centred on 5300 kHz (allocated in Finland), 5332 and 5348 kHz (allocated in the USA, Norway, Finland and Iceland). This will have to be done in consultation with the appropriate military authorities.

### **10 MHz Band – Increase in Power**

An increase in power from 100 watts (20 dBW) to 400 watts (26 dBW) was sought which is similar to other countries in

*(Continued on page 27)*



(Continued from page 26)

cluding the UK.

### **Upgrading the Segment 50.0-51.0 MHz to Amateur Primary**

The initial allocation on this band was 50.0-50.2 MHz and in April 2000 the band was extended, on individual application, to its present secondary allocation of 50.0-52.0 MHz.

In 2004, the band was made generally available. The segment 50.0-51.0 MHz is amateur primary in the UK including Northern Ireland and so far as we are aware there has been no interference with services here by stations operating in the 50 MHz band.

### **3.6 GHz Band (3410-3800 MHz)**

Attention was drawn to the European Common Allocations table footnote EU17 which states:

“EU17 In the sub-bands 3400-3410MHz, 5660-5670 MHz, 10.36-10.37 GHz, 10.45-10.46 GHz the amateur service operates on a secondary basis.

In making assignments to other services, CEPT administrations are requested wherever possible to maintain these sub-bands in such a way as to facilitate the reception of amateur emissions with minimal flux densities.”

The Society wish to see this footnote implemented by ComReg and reflected in the Radio Frequency Plan for Ireland.

In addition a secondary allocation was sought for the amateur service at 3400-3410 MHz.

### **Other Issues Raised**

#### **2.3 GHz Band**

In document 09/76 of 6 October 2009, ComReg published its Response to Consultation on the release of spectrum in the 2300-2400 MHz band.

While the Society would have liked to see the band below 2330 MHz reserved for current users (amateur, RURTEL and Dáil TV), the Society nevertheless welcomed the fact that this segment would be reserved for proposed Local Area and Closed User Groups.

The Society also welcomed the statement in paragraph 4.1.3 of Document 09/76 that amateur service access to the band has not changed, and will continue to be available for amateur use on a secondary (non-interference, non-protected) basis.

This will continue to include ATV repeaters in the segment 2370-2390 MHz.

However, as pointed out in the Society's response to the consultation, a change in use by the services with a primary allocation from one of a specialist nature, where deployment may be limited in either location or time or both, to one involving the provision of consumer based services operating on a 24/7 basis (e.g. Broadband) has the ability to make the band unusable by services with a secondary allocation.

#### **Compliance and Enforcement**

Concern was raised about Power-Line Transmission (PLT) and Power-Line Adaptors (PLAs) and it was emphasised that effective monitoring is an essential component of spectrum management.

Examples were given from reports on PLT devices commissioned by Ofcom which demonstrated the need for ComReg to be pro-active in the matter of market surveillance particularly in relation to licence exempt devices some of which have the potential to cause significant harmful interference to HF and VHF frequencies.

## **IRTS Meeting with ComReg**

A meeting with ComReg took place on 27th April. The following is the position reached at the meeting on the agenda items:

- **WRC 12 – Allocation at 500 kHz:**

ComReg are supportive of a worldwide allocation to the amateur service in the region of 500 kHz under Agendas Item 1.23 of the World Radiocommunication Conference 2012. The Department of Communications Energy and Natural Resources (DCENR) is the lead agency in policy matters related to ITU Conferences.

A paper on this matter has since been submitted to the Department and copied to ComReg. There is a separate piece on this matter elsewhere in this issue.

- **Increased Power for Contests:** ComReg has agreed to allow **all stations** (rather than an approved list of stations) to use increased power for the list of twenty five international contests submitted earlier.

The list would be updated each year. This will be effective from the time the list is published on the ComReg website. It is hoped the list will be up shortly.

- **Extension of 70 MHz Band:** In December 2010 ComReg announced its intention to re-open third party business radio licensing. Licences will not be issued in the 68.0 – 87.5 MHz band due to there being no demand when these licences were last issued in 2010.

ComReg indicated that it would consider favourably our proposal to extend the present 70 MHz band to 70.0 – 70.5 MHz as in the UK but would have to see what residual existing licences would have to be moved above 70.5 MHz. It was suggested by ComReg that we include this matter in our response to the Spectrum Strategy document. There is an item on the ComReg spectrum strategy document and the IRTS response to it elsewhere in this issue.

- **Re-issue of Lapsed call Signs:** We failed to make any progress on this matter. ComReg seem to be firmly against the re-issue of lapsed calls. Their belief is that if people were so attached to their call signs they would keep them active and they pointed to the ‘amnesty’ that was given prior to the introduction of the lifetime licence.

The question of the holders of three letter calls, who wish to do so, retaining those calls when upgrading to CEPT Class 1 Licences was raised and discussed.

These matters will be considered further by ComReg.

- **Duration and Fee for 5 MHz Licences:**

ComReg is not prepared to move on this issue.

Apparently there are a significant number of temporary licences granted to other services which are all of one year's duration at a fee of €30. ComReg take the view that making an exception for the amateur service and allowing the temporary 5 MHz licence to last for five years would lead to similar requests in respect of other temporary licences which could not then be refused.

A further meeting will be held later to discuss the renewal of the agreement under which IRTS is responsible for setting, organising and correcting the examination for the Harmonised Amateur Radio Examination Certificate (HAREC).

# EI's on EQSL (as at June 1st 2011)

Updates and enquiries to Thos EI2JD at [thoscaffrey@hotmail.com](mailto:thoscaffrey@hotmail.com)

# EI DXCC Listings (as at June 1st 2011)

|                           |           |                             |                        |
|---------------------------|-----------|-----------------------------|------------------------|
| <b>DXCC Challenge</b>     |           | <b>262 EI8GS (+13)</b>      | <b>30m</b>             |
| 2,422                     | EI7BA     | 242 EI2JD                   | 279 EI7BA              |
| 1,914                     | EI9FBB    | 230 EI9HX                   | 218 EI3IO              |
| 1,798                     | EI3IO     | 226 EI9FVB                  | 201 EI9FBB             |
| 1,569                     | EI7CC     | 225 EI9JF                   | 167 EI9JF              |
| 1,522                     | EI6FR     | 213 EI7GL                   | 166 EI6FR              |
| 1,173                     | EI6IZ     | 200 EI6IL                   | 160 EI6IZ              |
| 1,135                     | EI2JD     | 188 EI2CH                   | 116 EI4BZ              |
| 1,018                     | EI9JF     | 186 EI7II                   |                        |
| <b>DXCC Honor Roll</b>    |           | 185 EI4BZ                   | <b>20m</b>             |
| <b>Mixed</b>              |           | 177 EI9FE                   | 321 EI7BA              |
| 340                       | EI6FR/345 | <b>166 EI8IU (+13)</b>      | 306 EI6FR              |
| 334                       | EI7BA/338 | 162 EI4HH                   | 280 EI9FBB             |
| 333                       | EI2GS/340 | 162 EI9E                    | 247 EI3IO              |
| 333                       | EI6S/351  | 142 EI6HB                   | 217 EI9JF              |
| 333                       | EI7CC/347 | <b>131 EI2GLB (+31)</b>     | <b>201 EI8GS (+24)</b> |
| <b>333 EI8H/360 (New)</b> |           | 129 EI9HQ                   | 193 EI2JD              |
| <b>Phone</b>              |           | <b>120 EI5GSB (New)</b>     | 184 EI4BZ              |
| 332                       | EI6S/348  | 114 EI4EX                   | 174 EI6IZ              |
| 332                       | EI8EM/339 | 105 EI1CS                   | 161 EI9FVB             |
| 331                       | EI2GS/338 | 101 EI3IP                   | 134 EI6HB              |
| 331                       | EI7CC/345 |                             | 131 EI9E               |
| <b>Mixed</b>              |           | <b>CW</b>                   | <b>116 EI8IU (New)</b> |
| <b>360 EI8H (+4)</b>      |           | 324 EI7BA                   | 115 EI3GV              |
| 351                       | EI6S      | 316 EI7CC                   | 105 EI9HQ              |
| 347                       | EI7CC     | 288 EI6FR                   |                        |
| 345                       | EI6FR     | 267 EI9FBB                  | <b>17m</b>             |
| 340                       | EI2GS     | 253 EI9JF                   | 308 EI7BA              |
| 338                       | EI7BA     | 238 EI6IZ                   | 249 EI9FBB             |
| 323                       | EI3IO     | 236 EI4BZ                   | 192 EI6FR              |
| 306                       | EI2HY     | 208 EI2JD                   | 146 EI9JF              |
| 301                       | EI9FBB    | <b>182 EI8IU (+12)</b>      | 135 EI6IZ              |
| 287                       | EI9JF     | <b>166 EI5GM (+44)</b>      | 121 EI3IO              |
| <b>282 EI5GM (+27)</b>    |           | 155 EI1DG                   | <b>112 EI8IU (New)</b> |
| <b>280 EI9O (+9)</b>      |           | 119 EI7GY                   | 103 EI2JD              |
| 269                       | EI2CR     | 109 EI2IH                   |                        |
| 262                       | EI2GX     | 109 EI4HM                   | <b>15m</b>             |
| 262                       | EI2JD     | 107 EI/GM4ARJ               | 279 EI7BA              |
| <b>262 EI8GS (+13)</b>    |           | 100 EI6AL                   | 237 EI6FR              |
| 253                       | EI6IZ     |                             | 229 EI9FBB             |
| 252                       | EI4BZ     | <b>RTTY/Digital</b>         | 193 EI3IO              |
| 226                       | EI9FVB    | 186 EI7BA                   | 184 EI4BZ              |
| <b>225 EI8IU (+11)</b>    |           | 153 EI1DG                   | <b>180 EI8GS (+15)</b> |
| 210                       | EI6IL     | 142 EI6FR                   | 148 EI2JD              |
| <b>198 EI4GXB (+7)</b>    |           | 118 EI6HB                   | 142 EI9E               |
| 194                       | EI1DG     | <b>Satellite - No Entry</b> | 138 EI6IZ              |
| 173                       | EI6HB     |                             | 124 EI9FVB             |
| 170                       | EI4HH     | <b>160m</b>                 | 118 EI6HB              |
| <b>169 EI2GLB (+12)</b>   |           | 207 EI3IO                   | 109 EI3GV              |
| 164                       | EI9E      | 198 EI7BA                   | 105 EI9JF              |
| 134                       | EI9HQ     | 118 EI9FBB                  | <b>104 EI8IU (New)</b> |
| 133                       | EI7GY     | 117 EI6IZ                   |                        |
| 129                       | EI5GUB    |                             | <b>12m</b>             |
| 128                       | EI8HA     | <b>80m</b>                  | 231 EI7BA              |
| <b>120 EI5GSB (New)</b>   |           | 304 EI6S                    | 172 EI9FBB             |
| 117                       | EI3HA     | 254 EI7BA                   | <b>100 EI3IO (New)</b> |
| 111                       | EI5IF     | 206 EI9FBB                  |                        |
| 103                       | EI6AL     | 137 EI3IO                   | <b>10m</b>             |
| 101                       | EI7JQ     | 128 EI6FR                   | 253 EI3IO              |
| 100                       | EI4HQ     | 124 EI2JD                   | 229 EI7BA              |
| <b>Phone</b>              |           | 117 EI4BZ                   | 168 EI4BZ              |
| 348                       | EI6S      | 115 EI6IZ                   | 161 EI6FR              |
| 345                       | EI7CC     | <b>101 EI8GS (New)</b>      | 157 EI9FBB             |
| 339                       | EI8EM     | <b>40m</b>                  | <b>151 EI8GS (+7)</b>  |
| 338                       | EI2GS     | 284 EI7BA                   | 144 EI7GL              |
| 331                       | EI8AR     | 219 EI9FBB                  | 134 EI2JD              |
| 325                       | EI6FR     | 177 EI9JF                   | 128 EI4GK              |
| 322                       | EI7BA     | 176 EI3IO                   | 109 EI9E               |
| 300                       | EI8AU     | 171 EI6FR                   |                        |
| 286                       | EI3GV     | 153 EI6IZ                   | <b>6m</b>              |
| 284                       | EI9FBB    | 152 EI2JD                   | 160 EI3IO              |
| 264                       | EI4GK     | 135 EI4BZ                   | 111 EI7GL              |
|                           |           | <b>123 EI8GS (New)</b>      | 102 EI9FBB             |
|                           |           | 117 EI7GL                   | 101 EI3EBB             |
|                           |           | 105 EI9E                    |                        |
|                           |           |                             | <b>2m</b> ???          |



| DXCC Band Status (14/04/11) |        |      |     |     |     |     |     |     |     |     |    |
|-----------------------------|--------|------|-----|-----|-----|-----|-----|-----|-----|-----|----|
|                             |        | 160m | 80m | 40m | 30m | 20m | 17m | 15m | 12m | 10m | 6m |
| 10                          | EI9FBB |      |     |     |     |     |     |     |     |     |    |
| 10                          | EI3IO  |      |     |     |     |     |     |     |     |     |    |
| 9                           | EI7BA  |      |     |     |     |     |     |     |     |     |    |
| 7                           | EI6FR  |      |     |     |     |     |     |     |     |     |    |
| 7                           | EI6IZ  |      |     |     |     |     |     |     |     |     |    |
| 6                           | EI2JD  |      |     |     |     |     |     |     |     |     |    |
| 6                           | EI4BZ  |      |     |     |     |     |     |     |     |     |    |
| 5                           | EI8GS  |      |     |     |     |     |     |     |     |     |    |
| 5                           | EI9JF  |      |     |     |     |     |     |     |     |     |    |
| 4                           | EI9E   |      |     |     |     |     |     |     |     |     |    |
| 3                           | EI7GL  |      |     |     |     |     |     |     |     |     |    |
| 3                           | EI8IU  |      |     |     |     |     |     |     |     |     |    |
| 2                           | EI3GV  |      |     |     |     |     |     |     |     |     |    |
| 2                           | EI6HB  |      |     |     |     |     |     |     |     |     |    |
| 2                           | EI9FVB |      |     |     |     |     |     |     |     |     |    |
| 1                           | EI3EBB |      |     |     |     |     |     |     |     |     |    |
| 1                           | EI4GK  |      |     |     |     |     |     |     |     |     |    |
| 1                           | EI6S   |      |     |     |     |     |     |     |     |     |    |
| 1                           | EI9HQ  |      |     |     |     |     |     |     |     |     |    |

## North Cork Radio Group Annual Rally & Electronics Fair

**September 11th 2011**

After last years success, the North Cork Radio Group is pleased to announce their second annual rally and electronics fair at the Blarney Golf Resort, Tower, Co Cork. on Sunday September the 11th 2011.

The doors open to the public at 11.30 and the rally will run throughout the afternoon. The usual traders will be on hand with some very tasty bargains, South East Communications, Long Communications and JBT Trading.

The Hotel are also offering room deals for the rally, a room only from €59 and double room inc B&B: €79 Please contact the hotel directly for room bookings on: Tel:+353 21 4384477 . [www.blarneygolfresort.com](http://www.blarneygolfresort.com)

Small traders are very welcome but it essential that they contact the events organiser Liam EI7GTB, Tel: 085-7039042. Email: [ei7gtb@gmail.com](mailto:ei7gtb@gmail.com) as soon as possible.

Further details can be found via the group's website, [www.ei1nc.com.com](http://www.ei1nc.com.com)



## Bangor and District ARS Radio and Computer Rally

**Saturday 2<sup>nd</sup> July 2011**

**Donaghadee Community Centre  
Donaghadee, County Down BT21**

**Starts at 12 noon Admission £2.00**

Plenty of attractions include : Special interest stands, bring and buy, ballot and a good selection of radio and computer traders

Presntation by Ian White GM3SEK on Ferrite Cores & Baluns

Information and a map is available at our website [www.bdars.com](http://www.bdars.com)

**Contact Bill GI4AAM for further details:**

**Tel: 028 9181 6707**

**Email: [bill.langtry@btinternet.com](mailto:bill.langtry@btinternet.com)**

## Members Advertisements

### For Sale:

Yaesu SP-9000 dual speaker (boxed with manual & leads) €250.00  
MFJ High Q Loop. 7 to 22MHz with controller and mounting brackets €300.00

Kenwood 8MHz IF Filters -600Hz and 1800Hz €70.00 each.

Kent brass straight key €40.00

Buyer collects.

Contact Patrick EI4IR evenings/weekends 087 6113057

### For Sale:

Yaesu/SMC 545L1 single channel commercial UHF transceiver with matching AC FP-5 base station PSU 13.8V / 4 Amps. Some alignment data included.

Yaesu/SMC1045L2 two channel commercial UHF transceiver with matching AC FP-16 base station PSU 13.8V / 3.5 Amps. Maintenance Service Manual included.

€50 for the lot. Collect in Dublin.

Yaesu YM-38 dynamic microphone. dual imp 600 ohm/50K ohm. Flexi gooseneck type. €10. Collect in Dublin

Sean Carvin -- EI2CR Tel 01-8107383

## Radio News Deadline

**Noon on  
Thursdays**

**Input to  
[newsteam@irts.ie](mailto:newsteam@irts.ie)**



**Willie Long EI6AI**

In action at the Lough Erne Rally

## Results 2m Counties Spring 2011

| Call Sign | Valid QSO's | Counties | Total Score | County |
|-----------|-------------|----------|-------------|--------|
|-----------|-------------|----------|-------------|--------|

### a) High Power Portable

|      |   |    |    |       |     |
|------|---|----|----|-------|-----|
| *EI* | EI7DAR/P, Dundalk ARS<br>ops: EI2JD, EI3KE, EI4HX,<br>EI9CJ, EI9GTB, 2I0SBI | 53 | 20 | 4,300 | LOU |
|      | EI2SBC/P, Shannon Basin R. C.<br>op: Brian Canning                          | 20 | 9  | 756   | LEI |

### b) Low Power Portable – max 10w.

|       |   |    |    |       |     |
|-------|---|----|----|-------|-----|
| *EI*  | EI7GY/P, Joe Ryan                               | 67 | 23 | 7,153 | WIC |
| *OEI* | MI0VKO/P, David Corbett                         | 41 | 18 | 3,564 | FER |
|       | EI7GEB/P, David Morgan                          | 34 | 18 | 2,880 | CAV |
|       | EI7MRE/P, Mayo REN<br>ops: EI2GCB, EI9JA, EI9JS | 28 | 12 | 1,104 | MAY |
|       | EI8GZB/P, Pat Ryan                              | 5  | 4  | 56    | CLA |

### c) High Power Fixed.

|       |                       |    |    |       |     |
|-------|-----------------------|----|----|-------|-----|
| *EI*  | EI4CF, Niall Foley    | 44 | 18 | 2,718 | GAL |
| *OEI* | MI0RRE, Robert Rantin | 34 | 12 | 1,380 | ARM |
|       | GI4SRQ, George McHugh | 27 | 12 | 960   | ARM |
|       | EI2KC, Anthony Murphy | 20 | 11 | 946   | LOU |
|       | EI7KD, Oleg Solovyov  | 31 | 10 | 860   | DUB |
|       | 2I0VAX, Peter Holmes  | 17 | 8  | 448   | ANT |

### d) Low Power Fixed – max 10w.

|      |   |    |    |       |     |
|------|---|----|----|-------|-----|
| *EI* | EI7T, Tipperary ARG<br>op: EI2IT                        | 33 | 17 | 1,785 | TIP |
|      | EI2NCR, North County R. C.<br>ops: EI2HX, EI7CHB, EI3HS | 22 | 9  | 900   | DUB |
|      | EI4GXB, Ger McNamara                                    | 19 | 6  | 312   | CLA |
|      | EI3GAB, Anthony Cummins                                 | 8  | 5  | 175   | COR |
|      | EI3GYB, Michael Foertig                                 | 16 | 5  | 175   | MAY |

### e) FM Only – Single Op.

|      |                         |    |    |       |     |
|------|-------------------------|----|----|-------|-----|
| *EI* | EI2GLB/P, Trevor Dunne  | 22 | 15 | 1,380 | OFF |
|      | EI7GBB, Kevin Sanderson | 16 | 12 | 912   | LON |
|      | EI3FFB, Eamonn Kavanagh | 15 | 11 | 506   | TIP |

### f) SWL

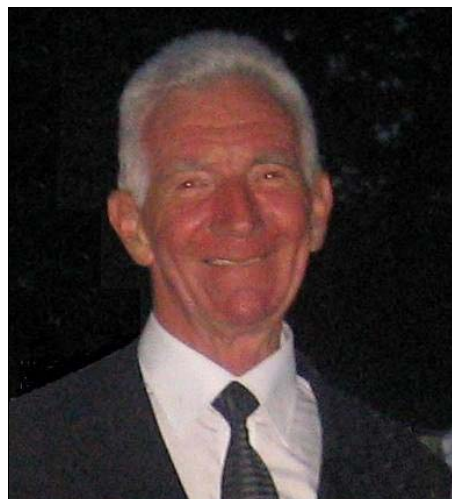
|      |                       |    |   |     |     |
|------|-----------------------|----|---|-----|-----|
| *EI* | EI1588, Shauna Baynes | 10 | 9 | 414 | MAY |
|------|-----------------------|----|---|-----|-----|

### Check Logs:

EI3JZ, EI5GLB/P, EI6GHB, EI7JG, EI9GLB, M0SCG/P.

\*EI\* = Award Winner : Leading EI Station

\*OEI\* = Award Winner : Leading station outside EI



**Pat EI8H** has been awarded the 360 sticker in the DXCC Mixed section. Well done Pat on being the first EI to reach 360, a real achievement and proof that Pat has really been around the world (360o) in his greater than 45 years of Ham Radio.

## GI HF Conference

West Tyrone Amateur Radio Club announce a new event for 2011.

The GI HF Conference will be held on Saturday 20th August 2011 at the Technology Education Centre, Omagh, BT78 1FA  
Registration from 11am

Further details to follow.

## Lough Erne Rally April 1st 2012

Next year's Lough Erne Rally is set for a date that is very easy to remember – Sunday 1 April 2012.

The venue is again the big Arena at the SHARE Centre, near Lisnaskea.

Traders big and small are very welcome, as are club displays and stands promoting the many interesting areas of amateur radio.

The usual strong attendance is expected from North and South with some from Great Britain.

Michael Clarke MI5MTC,  
Chairman LEARC



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**Please note: I can still be contacted at [jimbobtraynor@utvinternet.com](mailto:jimbobtraynor@utvinternet.com)**



**IC-R1500**

**Receiver/Scanner**

**£275.00**

Used: Boxed etc

**POWER-MAX-25-NF**

22 Amp cont switch mode vari-  
able volts power supply  
22 Amp cont, 25 Amp peak,  
V/A meters, noise offset



**£89.00**

**IC-7000  
HF/VHF/UHF Transceiver  
£825.00**

Used: Mint, as new.  
160m to 70cm



**FC-30**

FC-30 External Automatic ATU HF/6m for  
FT897 & FT857 \* 1.8-30MHz, 50-54MHz \*  
50 Ohms (impedance range 16.5-150 Ohms)  
\* 100W max input \* ATU memories 100 \*  
**£171.00**



**IC-R8500**

**£699.00**

Used HF/VHF/UHF  
Receiver/Scanner.  
0.1-2000MHz  
1000 Memories

**SP-23K Base Speaker**

**£68.00**



**SM-20 Deluxe Base Station Desk Mic**

**£134.00**



**Kenwood TS-140S  
£295.00**

Used.  
In good condition.

**DMU-2000**

**£895.00**

DMU-2000 Optional Data Management Unit for  
the FT2000 and FT950 Transceivers. The Yaesu  
DMU-2000 provides a wide array of informative and useful  
displays for the FT2000 and 950 including Spectrum Scope  
with Limited Bandwidth Sweep, Audio Scope / Oscilloscope  
Display Page, Swept Frequency SWR Page, Memory Channel  
List, World Clock and Grayline Page, Rotor Control Page and  
Log book feature.



**IC-751  
£300.00**

Used.  
In good condition.  
Boxed.



**FC-800 £225.00**

FC-800 Used as new with lead



**MC-90 Desk Mic for DSP Transceivers**

**£187.00**



**New Equipment**

**All makes/models supplied  
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**Good clean secondhand equipment,  
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Top prices paid**

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Shortwave Receivers  
Scanning Receivers  
GPS Systems  
Accessories**



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Dunmore East,  
Co. Waterford.  
Tel: 051-385853  
087-2513772**

## Used Equipment - All prices for straight sales

|  |           |
|--|-----------|
| Adonis AM-503G. Both Microphones wired for Kenwood .....                                   | €65.00    |
| AirNav 3D Radar Box. Used .....  | €399.00   |
| Alinco DM330MW. 30 Amp Switch Mode Power supply. New .....                                 | €139.00   |
| Alinco DX-SR8E. Latest HF Rig from Alinco. New .....                                       | €699.00   |
| Ameritron 811 HXCE. 800w Amplifier. As new. ....   | €899.00   |
| Antron 99 Fibreglass Base Antenna, 10/12m .....  | €89.00    |
| AOR 5000 Base Receiver. 0-2600MHz, All Mode .....  | €1199.00  |
| AOR SDU 5000. Spectrum Display Unit. As New condition .....                                | €499.00   |
| AOR 8600 Mk11. 100kHz-3000MHz Rx As new .....  | €75.00    |
| Bearcat BC9000XLT Base/Mobile scanner 25-1300 MHz AM, WFM .....                            | €225.00   |
| Daiwa CN-801. New. 2kw SWR/Power Meter.<br>Auto calibrate 1.8-200 MHz .....                | €149.00   |
| Garmin Quest Handheld GPS. Ireland & Europe .....  | €99.00    |
| Global AT-1000 SWL ATU .....   | €75.00    |
| Icom IC-7200. HF + 6m with rack handles .....  | €725.00   |
| Icom UT-106. DSP Unit for IC-706 etc. ....   | €75.00    |
| Icom IC-7400 HF/2m/6m. DSP. Auto ATU .....   | €1,075.00 |
| Icom IC-2725 2m/70cm Mobile .....  | €299.00   |
| Icom SM-20 Desk Microphone. As New .....   | €139.00   |
| Icom IC-756PRO. HF + 6m Auto ATU. Boxed, mint .....  | €1,399.00 |
| Icom IC-7000 HF to 70cms. Mobile rig with DSP. Boxed. Mint .....                           | €999.00   |
| Icom IC-707. Icom Budget HF Transceiver. 100w private sale .....                           | €299.00   |
| Icom IC-706 MKII HF/6/2m All Mode Boxed .....  | €599.00   |
| Kenwood MC-60A As new desk microphone for Kenwood range .....                              | €119.00   |
| Kenwood TS-570DGE, HF rig with DSP AUTO ATU .....  | €799.00   |
| Kenwood PS50 20. Amp matching PSU for TS140, 440 etc. ....                                 | €125.00   |
| Kenwood THD7E. 2/70 dual band H/H will operate SKY commands .....                          | €299.00   |
| Kenwood TS-847SAT. Auto ATU DSP Boxed, mint .....  | €999.00   |
| Kenwood TS-850SAT. 0-30MHz. Just had full service .....                                    | €799.00   |
| Kenwood TS-2000 HF to 70cms Auto Tuner. Satellite Ready .....                              | €1,195.00 |
| Kent Brass Straight Morse Key. Boxed, New .....  | €89.00    |
| Linear Amp UK. 700w 70cm Amp. Bargain ... Now .....  | €699.00   |
| MFJ 934 Antenna Tuner/artificial ground .....  | €99.00    |
| MFJ 949E. 300 watt manual ATU 0-30MHz. New .....   | €209.00   |
| MFJ-204B Antenna Noise switch .....  | €75.00    |
| SGC MAC 200 Master Antenna Controller, up to 5 antennas with built in<br>smart tuner ..... | €239.00   |
| Shure 444. Desk Mike .....   | €69.00    |
| Solar Panels. 2.4 watts. Comes with cigar charger & croc clips .....                       | €39.00    |
| Timewave DSP 9+ Noise Filter. Great reviews .....  | €149.00   |
| Watson 22 Amp 0-15v PSU. Special offer - New! .....  | €89.00    |
| West Mountain Radio Rig Blaster Plus, including leads .....                                | €149.00   |
| Yaesu FC-20. Auto ATU for FT-847 etc. ....   | €275.00   |
| Yaesu FT-920AF. HF + 6m Base Station. Auto ATU, DSP .....                                  | €899.00   |
| Yaesu VX7R. Tri Band Waterproof Handie. Extras fitted .....                                | €279.00   |
| Yaesu FT-950. Boxed as new. 15 months old. ....  | €call     |
| Yaesu FC-102. 1200 watt ATU. Good condition .....  | €349.00   |
| Yaesu Manual 300 watt ATU. Good condition .....  | €149.00   |
| Yaesu FT-897 + optional PCX09 .....  | €699.00   |
| Yaesu F817ND BHI Module fitted. As new .....   | €499.00   |
| Yaesu FT-847. Boxed As new. No Modifications .....   | €899.00   |
| Yaesu FT-857D. HF/6m/2m/70cm Mobile. Boxed, as new .....                                   | €675.00   |
| Yaesu FT840. Compact base/mobile rig. 100w. Boxed, as new .....                            | €525.00   |
| Yaesu VR-5000 All Mode Receiver. 0-2.6GHz .....  | €475.00   |
| Yaesu FT-900 AT + filters. Classic HF Rig with Auto ATU .....                              | Call      |
| Yaesu FT-51R Dual band handheld with drop in charger .....                                 | €175.00   |
| Yaesu MD-100 A8X As new desk microphone for Yaesu range .....                              | €119.00   |
| Yaesu FC-30 External ATU for FT 897 or FT 857D .....                                       | €185.00   |

## Base & Handheld Scanner Sale

**All with 30 day warranty  
When they are gone they're gone!**

|  |         |
|--|---------|
| Uniden UBC244CLT Base Scanner .....                  | €89.00  |
| GRE PSR295. 1000 Memories. Handheld scanner .....    | €99.00  |
| Yupiteru MVT7200. All Mode, 1000 Ch, 0-1650MHz ..... | €149.00 |
| Yupiteru MVT7100. All Mode, 1000 Ch, 0-1650MHz ..... | €149.00 |

## Special Offer

**Diamond BB7V 6.5m vertical  
2 - 30MHz. No radials €399.00**



**TYT TH-UVF1.**

Latest dual band  
handheld  
from China.  
Drop in charger

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